The RUBBER AGE

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Litchfield Chosen to Head Rubber Association During 1928

Seiberling and Broadwell Elected Vice-Presidents—Weston Condemns Vicious Competition in Tire Industry—Association Incurs Small Deficit on Operations in 1927, But Surplus Account is Still Large—Crude Rubber Fee Unchanged—Budget is Reduced

P. W. LITCHFIELD, president of the Goodyear Tire and Rubber Company, Akron, O., was elected on January 9 by the board of directors of the Rubber Association of America, Inc., to serve as president of that organization during 1928. He succeeds J. C. Weston who has been president since 1926. F. A. Seiberling, president of the Seiberling Rubber Company, also of Akron, was elected first vice-president. E. H. Broadwell, vice-president of the Fisk Rubber Company, Chicopee Falls, Mass., was chosen second vice-president.

Six Directors Elected

The election of the board was held immediately at the conclusion of the annual meeting of the Association at which six new directors were elected by the members. These directors participated in the election of the new officers.

In addition to choosing officers for the principal posts in the Association, the directors re-elected Samuel Woolner of the Kelly-Springfield Tire Company as treasurer and E. M. Bogardus of the Fisk Rubber Company as assistant treasurer. A. L. Viles was re-elected general manager and secretary and other members of the Association staff were continued in their present offices.

The elevation of Mr. Litchfield to the presidency was expected inasmuch as he had served for two years as first vice-president of the Association. He has taken an active interest in the affairs of the organization for many years.

Mr. Seiberling's election to the first vice-presidency probably brings him into line to head the Association in 1930. He has previously served as vice-president but never as president. That honor was apparently due to fall to him some six or eight years ago but the financial troubles of the Goodyear Tire and Rubber Company which resulted in his resignation as head of that company apparently also nullified his chance of elevation to the Association presidency at that time. In recent years the general custom of the Association directors has been to continue a president in office for two years and then advance the men who have served as vice-presidents in the meantime.

Directors who were elected to serve for three years are as follows: Mr. Litchfield, Mr. Broadwell, Mr. Seiberling, H. L. McClaren, president of the Ajax Rubber Company, and J. C. Weston, chairman of the board of directors of Ajax. Harry Hough, president of the B. F. Goodrich Rubber Company, was elected a director to succeed W. O. Rutherford who had surrendered the directorship following his recent resignation of the vice-presidency of Goodrich. Mr. Rutherford's term would have expired in 1929 and Mr. Hough's election is accordingly for one year only.

P. W. LITCHFIELD

The annual meeting of the Association covered little more than the dispatch of routine business. Not more than fifty firm members were in attendance and all elections were unanimous. Reports of the general manager and treasurer were likewise approved by acclamation.

Weston Reviews Conditions

The retiring president, J. C. Weston, presented a brief review of the present conditions in the rubber industry, dwelling in particular on the bitter and frequently destructive competition among tire manufacturers. He stressed the necessity of more reasonable merchandising practices to match the progress which had been made on the production side. The present competition was characterized as "vicious," and Mr. Weston indicated his belief that it frequently resulted in increased cost to the consumer instead of a lowering of the ultimate price.

Members were told by Mr. Weston that much benefit would probably result from the study now being made of plantation rubber in the Middle East by H. N. Whitford, manager of the Association's crude rubber department. Mr. Whitford has been in the East since last June and is not expected to return until April. He is giving particular attention to native rubber.

The report of the general manager was presented in a new abbreviated form with the explanation that activities had become so numerous that detailed explanation was impracticable. The report was divided ac-

cording to the subjects which had been dealt with by the various divisions. Each division had a number of important accomplishments to report. The adoption of uniform trade practices appeared as a big factor.

The report of the treasurer for 1927 showed that expenditures had slightly exceeded income but it was explained that this was due in part to charging to 1927 the expense of certain phases of educational work which had been launched in 1926. Income during 1927 amounted to $185,065.11 of which $163,454 was derived from crude rubber fees paid by manufacturing members and $10,275 came from interest on investments. Only $7,044 came from membership dues.

Expenditures for 1927 amounted to $193,693. The resulting deficit was $8,628. Administrative expenses were $106,633; divisional, $56,888; and special, $28,034. The tire and rubber flooring divisions incurred the highest expenses during the year.

Assets of $247,341

The loss of $8,628 on its 1927 operations was deducted from the Association's surplus but the organization was nevertheless left in a comfortable financial position. At the beginning of 1928 assets amounted to $247,341, of which $215,552 represented investments in bonds. This figure, however, is merely the cost price of the bonds now held and the treasurer reported that their market value on the first of the year was $234,871.

The deficit in 1927 was not due to unexpected expenditures since all expenses were kept within the budget adopted for the year. F. A. Seiberling, chairman of the budget committee, complimented the Association management on such a showing and reported a slightly decreased budget for 1928.

The crude rubber fee, on which the Association depends chiefly for support, was continued at the present rate of 2¾ cents per 100 pounds of rubber consumed.

Rubber Association Banquet Attracts Large Attendance

More Than 850 Members and Guests Enjoy Dinner and Entertainment at Hotel Commodore—Donovan, Schermerhorn and Werrenrath on Program—Harvey Firestone Recalls Old Rubber Club Days

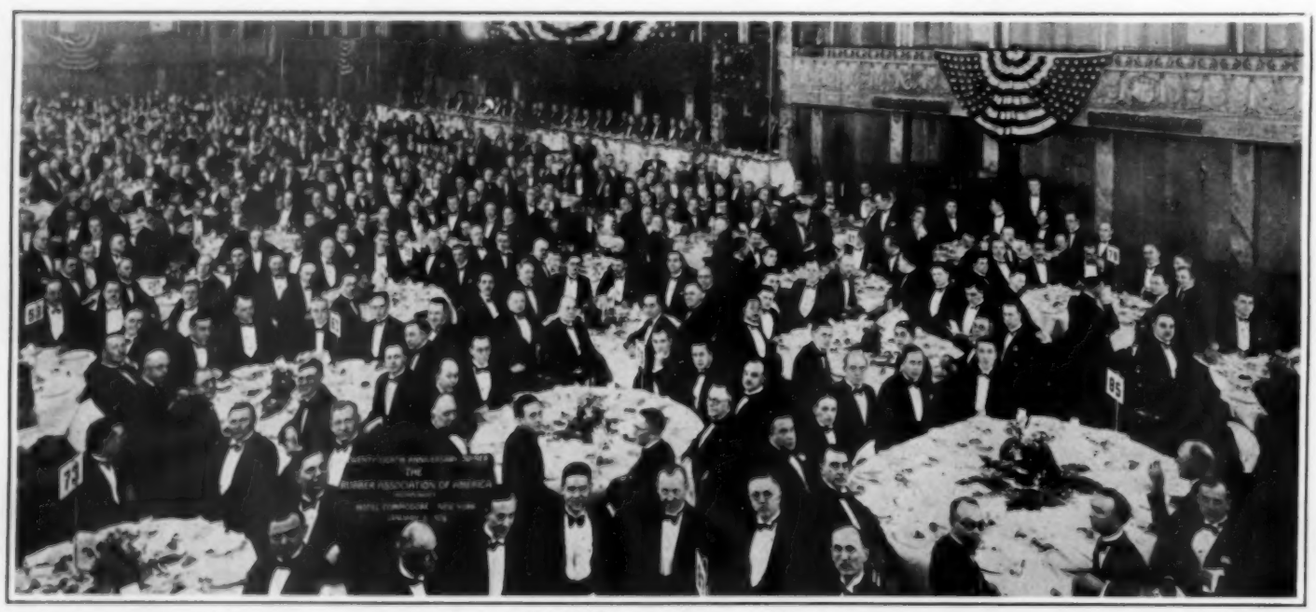
THE 28th annual dinner of the Rubber Association of America, Inc., was held at the Hotel Commodore, New York City, on the evening of January 9 with about 850 members and guests present. The chief speaker was Col. William J. Donovan, assistant to the Attorney-General of the United States. James Schermerhorn, formerly publisher of the Detroit *Times*, made a humorous address and the guests were also entertained by Reinald Werrenrath, baritone. J. C. Weston, retiring president of the Association, presided.

An unexpected feature of the dinner was the presence of Harvey S. Firestone who has refrained from taking any public part in the Rubber Association's affairs since he withdrew his company from membership in the organization five years ago. This year he not only attended the dinner but also accepted an invitation to address the guests. He spoke in a reminiscent vein of the Rubber Club which, as an almost purely social organization, preceded the present Association. It was while Mr. Firestone was president of the Rubber Club that the decision was made to reconstruct it along trade association lines.

Mr. Firestone also dwelt on the unfavorable aspects of the present crude rubber situation. For America to fail to secure an interest in crude rubber production that is more in keeping with her consumption of the commodity is a commercial crime, Mr. Firestone insisted. He urged the greatest cooperation between all members of the industry in providing safeguards against unreasonable treatment by crude rubber producers.

Mr. Weston read a letter from Henry C. Pearson, one of the founders of the old Rubber Club and former publisher of the *India Rubber World*, in which he presented a rubber gavel which had been used at some of the first meetings of the organization. The gavel had been received and the chairman announced that it would be used at Association dinners hereafter.

The address of Col. Donovan was one of the most earnest speeches that has been made before a Rubber Association audience in many years. In his talk, part of which is reproduced on the next page, he urged a greater cooperation between business men and the government in order to make feasible an intelligent administration of the laws as well as honest enforcement. Col. Donovan has had considerably to do with trade association cases in the Department of Justice at Washington and recognized the need which business has felt for being able to have the legal advice of industrial plans passed upon before they are put into effect. Such a practice he heartily approved.



The 1928 Banquet of the Rubber Association, Hotel Commodore, New York City

Donovan Urges Intelligent Enforcement of BUSINESS LAW

Assistant to Attorney General, in Address at Rubber Association Dinner, Holds That Intelligence Ranks With Honesty in Administering Industrial Legislation

INTELLIGENT and cooperative enforcement of business law, and the proper conduct of business to make such enforcement practical, was the keynote of the forceful address of Colonel William J. Donovan, assistant to the Attorney-General of the United States, before the 850 guests attending the 28th annual dinner of the Rubber Association of America on January 9. The changed light in which trade associations are viewed by the Department of Justice was clearly reflected in the speech. A cooperative attitude, rather than a suspicious one, appeared to be the new order.

The high-light of Colonel Donovan's address was reached, it appeared, when he spoke of the desirability of administering business law, particularly the Sherman anti-trust law, as a preventative instead of a punishment. This implies interpretation of the law in advance in order to prevent unknowing violations and is a factor in which such organizations as the Rubber Association have been interested from time to time. The service of prior interpretation is one with which Colonel Donovan showed himself to be in complete sympathy. His remarks, were, in part, as follows:

"To my mind it is just as important to have an intelligent enforcement of the law as an honest enforcement of the law, and you cannot have an intelligent enforcement of business law unless you try to understand the practical problems with which business is confronted.

"I think it a healthy thing if an honest business man with his industrial plan can come to the Government upon whose fairness he relies and present that plan. I think it is a healthier thing if government itself is prepared with courage and with honesty to take a look at that plan and give the business man the information to which he as a citizen is entitled to let him know whether or not the enactment of that plan would amount to a violation of the law, because I believe that the fundamental purpose of the Anti-Trust Law was to prevent abuses and to stop a plan before it had been consummated into a violation of the law.

"Some time ago President Coolidge pointed out that our prosperity is not due to regulation, that it has been based upon the principle that human welfare can best be preserved by insisting upon personal initiative rather than by resorting to governmental regulation and participation.

"Now the Sherman Law has been based upon that idea. It represents the enactment of a statute to preserve the constitutional freedom of trade. If you modified it it would mean greater restriction upon trade because if men were permitted to enter into agreements to fix prices, to allocate territory, to allot customers and to build up monopolies and monopolistic power, its inevitable corollary would be that there would be further governmental participation because people remember that in the history of monopolies they have always suffered, and if the end of free competition has come, the end of private enterprise has come, because no people would permit any power to control the prices of necessaries of life without governmental control.

"When an industry fails to make money in a period of normal times, it is an indication or index that there is something wrong with it. Now that may come from several causes.

> *"I think it a healthy thing if an honest business man with his industrial plan can come to the government upon whose fairness he relies and present that plan. I think it is a healthier thing if government itself is prepared with courage and with honesty to take a look at that plan and give the business man the information to which he, as a citizen, is entitled to let him know whether or not the enactment of that plan would amount to a violation of the law."*
>
> —COLONEL DONOVAN.

Col. William J. Donovan

As I sit at my desk and these various industries come in and present their problems, I find that the fundamental difficulty with so many of them is that they don't know what it costs to turn out their product. Or if they do know, they are blinded by vicious competition and deliberately ignore the fact that they are selling goods below what may mean for them a real profit.

"Of course you and I know that in our development of products we have failed to devote the same time and the same thought to the problem of distribution, and in every industry you will find economic waste and extravagance which in the long run has its effect upon the consumer. And the thing that I know is that an industry in such a stage so easily develops those unfair and vicious practices that are condemned by the law, because when a man is in desperate straits he is apt to do an illegal thing. Then it is that he seeks to ameliorate the condition which has been caused by his own stupidity and he flies to trade agreements that will fix prices or allocate territory, when if he only knew and would only profit by the experience of industries in this country, that the surest way to bring about destruction of an industry is by such an agreement.

"There should be stability in industry but it cannot come by short-cut methods. It can only come by the application of economic and scientific principles. Now there is recognition of that fact by decisions of the courts, and an Association such as yours is a mechanism to put those principles into effect. Such an Association is recognized as a leader. Your course of conduct has been laid down by certain decisions of the Supreme Court . . . "

DR. W. A. GIBBONS
Elected Chairman of
New York Group

New York Group of Rubber Division Holds Meeting

Attendance at Organization Meeting Exceeded 250—F. R. Henderson Speaks on Buying and Selling Crude Rubber

DONALD F. CRANOR
Elected Secretary-
Treasurer of N. Y. Group

THE organization of local groups within the Rubber Division of the American Chemical Society, a movement which has been widely discussed since it was sanctioned at the annual meeting of the Division in Detroit last September, got away to a flying start on the evening of January 11 when the New York group held its first meeting. About 250 rubber chemists and others interested in their work were present which, incidentally, was a much larger attendance than had been anticipated. Divisional officers, as well as those in charge of the organization of the group, took the enthusiasm of the first meeting as an indication that the local group movement would be highly successful.

Plans of Other Groups

Los Angeles, the second city in which a group is to be formed, held its first meeting on January 20. As announced in the last issue of THE RUBBER AGE, the speaker was Herbert A. Endres, research chemist of the Celite Company of Lompoc, Calif., and his subject was "The Crystallization of Sulphur in Rubber and the Phenomenon of Blooming." The speech was to have been illustrated with slides. At the time this is written, a detailed report on the Los Angeles meeting had not yet been received in New York.

The first group meeting in Akron is scheduled for the evening of February 15. It will be held at the Akron City Club, with dinner at 6:30. The speaker will be Dr. G. F. Lamb, professor of geology at Mt. Union College, Alliance, Ohio. His subject will be "The Distribution and Seasonal Fluctuation of Akron's Water Supply, Both Surface and Underground." R. P. Dinsmore, Goodyear chief chemist who is handling the organization of the Akron group, feels that the subject will be of interest to all rubber engineers in the Akron district and expects pertinent discussion to be led by those dealing with water problems in connection with rubber factories.

The speaker before the New York group meeting was F. R. Henderson, president of the Rubber Exchange of New York, who spoke on "The Buying and Selling of Crude Rubber." The channels through which rubber, both wild and plantation, passes on its way to the consumer were carefully described and explained. Since Mr. Henderson was able to combine a most agreeable style of delivery with his recognized grasp of such a subject, the speech was received with unanimous approval.

An interesting point brought up by Mr. Henderson concerned the marketing of wild rubber before plantation rubber became predominant. In those days, he pointed out, a crude rubber importer in New York had to know the value and quality of between 300 and 400 grades of rubber. In fact, no less than 400 grades were listed in the cable codes.

Mr. Henderson referred only briefly to British rubber restriction. "I believe that the British producers have long since believed with most of us that the day for the necessity of the Restriction Act has passed," Mr. Henderson said. "It reminds me of the Irishmen who, when he was told to chase the wild-cat down out of the tree, replied, 'Chase him down? For heaven's sake, come up and help me let go of him.'" The adherence of the British to restriction, the speaker suggested, was probably due to their desire to perfect the workings of the law before it is rescinded so that it can be readily revived at any time it is needed.

Group Officers Elected

Dr. A. A. Somerville, who had served as chairman of the organization committee, presided at the New York meeting. In the election of group officers for 1928, Dr. W. A. Gibbons of the United States Rubber Company was chosen chairman with Donald F. Cranor of the Binney & Smith Company as secretary-treasurer. Both elections were by acclamation.

Following Mr. Henderson's talk the chairman called on various speakers for brief remarks. Among those who spoke were Dr. W. C. Geer, W. M. Morse, managing editor of the *India Rubber World*, and P. L. Palmerton, editor of THE RUBBER AGE. The chairman also introduced several past chairmen of the Rubber Division who were present. These included John B. Tuttle, W. W. Evans, W. B. Wiegand, E. B. Spear, C. R. Boggs, and J. M. Bierer. H. L. Fisher, the present chairman of the Division, also was called upon for a brief address. R. P. Dinsmore, who preceded Dr. Fisher as Divisional chairman, could not be present, but sent a telegram expressing his best wishes for a successful meeting.

A surprising number of rubber chemists from outside the New York territory were able to attend the meeting. Boston and Akron were both well represented.

No plans have as yet been made for the next meeting of the New York group nor has any definite outline been drawn up as to what will constitute a year's program. It is anticipated that at least one and possibly two more meetings will be held before summer.

WEISS PATENT APPEAL IN SUPREME COURT

What is expected to be the final stand to uphold the validity of the Weiss patent No. 1,411,231 on di-substituted guanidines took place in Washington on January 16 and 17 when the appeal of the Corona Cord Tire Company against the decision awarded to the Dovan Chemical Company on December 8, 1926, by United States Circuit Court of Appeals for the Third District, was argued before the Supreme Court of the United States.

Hon. John W. Davis, with J. J. Kennedy and J. S. Wooster as associates appeared for the Dovan Chemical Company, while D. S. Edmonds of Pennie, Marvin, Davis and Edmonds, represented the Corona Cord Tire Company.

The arguments on both sides were short, lasting somewhat less than three hours. Inasmuch as the Supreme Court has already adjourned to reconvene on February 20 it is expected that a decision will be handed down about that time.

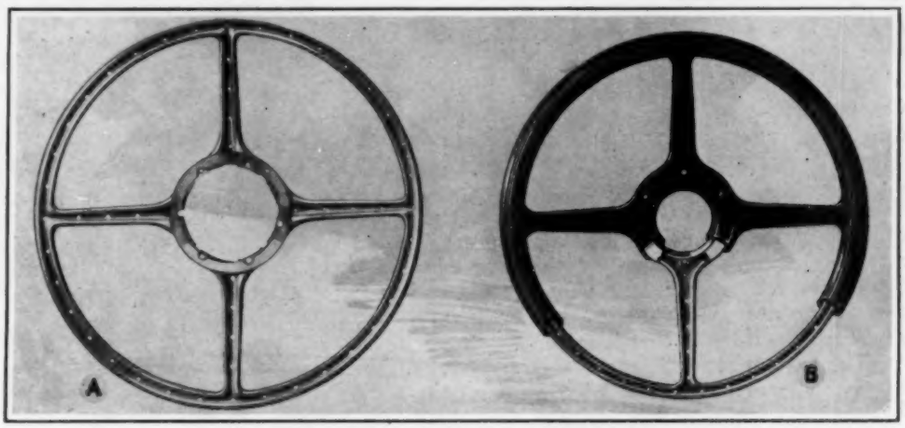
Hard Rubber Steering Wheels Are Feature of Auto Show

Greater Strength and Safety is Claimed for New Wheel Which Has Already Been Adopted for Seven Cars—Ford Using Similar Equipment—Rubber Figures Prominently in Other Ways at N. Y. Show

ALTHOUGH displays of rubber products, either tires or other goods, were completely lacking at the New York Automobile Show which ran at the Grand Central Palace, New York City, during the week of January 9, the rubber industry found it as interesting as in former years by reason of the steadily increasing use which motor car manufacturers are making of rubber.

Five new sizes of balloon tires were seen on the new model automobiles which were on display. Chief among these was the 30 x 4.50 which supplants the 29 x 4.40 on the new Chevrolet cars. This size is the same as that adopted for the new Ford and its adoption by these two companies means that it will probably come to be the most popular size. The other new sizes appeared on heavier cars and were apparently dictated by the automobile engineers who did not find any of the current sizes exactly applicable to the engineering problems encountered in connection with new models. None of them are likely to figure in the replacement trade in any important way, at least for some time to come.

The Ford Motor Company followed its usual practice of refraining from participation in the New York Automobile Show. This show is sponsored by the National Automobile Chamber of Commerce to which Ford does not belong. However, the Ford Company had an interesting show of its own running concurrently in the basement of Madison Square Garden. New model Fords were on display as were working models of many of the Ford plants which, in general, cover the production of materials or parts used in building Ford cars. It was pointed out at this show that the 30 x 4.50 balloon tire had been adopted for the new Ford to assure superior riding qualities for the new and heavier car.



THE HUSTED HARD RUBBER STEERING WHEEL
***Fig. A*—Perforated Steel Frame. *Fig. B*—Finished Wheel With Hard Rubber Covering Cut Away to Show Construction**

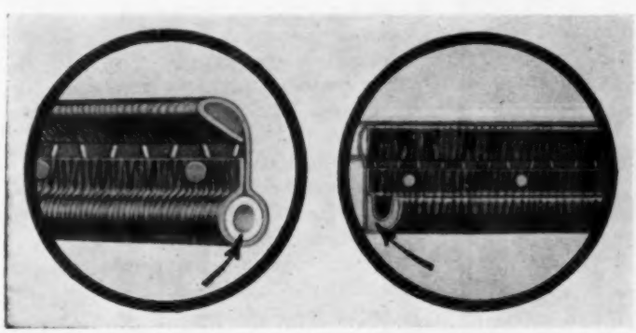
Perhaps the most interesting development in the use of rubber in motor cars displayed at the New York Automobile Show was that of hard rubber steering wheels which were used on no less than seven well-known cars. These are Essex, Chrysler, Willys-Knight, Hudson, Falcon, Packard and Paige.

The new wheel is known as the Husted safety steering wheel and is manufactured by the American Hard Rubber Company. It consists merely of a steel frame covered completely with hard rubber. The American Hard Rubber Company buys the steel frames complete and the hard rubber is applied in their plants. This line has been developed in the last six to eight months. The fact that leading companies such as those named above have already accepted it is believed to indicate a much wider adoption of it in the next year.

As will be seen in the accompanying photograph, the entire periphery of the steel frame, as well as the arms, is perforated with small holes. The hub of the steering wheel is strengthened by welding in a reinforcing ring of sheet steel. The metal wheel is then entirely covered with hard rubber which, prior to vulcanization, binds itself into one piece throughout by extending through the perforations. When vulcanized, an attractive steering wheel results. Often the hard rubber steering wheels are smaller in cross section than the usual wood wheels.

Several advantages are claimed for the hard rubber wheels, the principal one being strength and, as a result, safety. In case of accident the likelihood of breaking the steering wheel is much less than in the case of the wooden wheel. The steel inner structure resists breakage and a moderate degree of bending can be withstood without breaking the hard rubber sheathing. Attractive appearance is

(*Concluded on page* 418)



***Left*—Carter Windlace for Interior Finish of Closed Cars. Arrow indicates Rubber Tubing Insert. *Right*—Carter Drip Moulding. Arrow Indicates Flexible Rubber Core**

A Continuous System for Moving Chemicals to the Mixers

Method Used in Ohio Mechanical Rubber Goods Factory for Conveying Chemicals and Compounding Ingredients from Bins to Mixers Has Resulted in a Great Saving of Time and Labor

EFFICIENCY in handling chemicals and compounding ingredients has been achieved to such a degree in the Willoughby, Ohio, plant of the Ohio Rubber Company that experts on conveying have called the system an ideal one for the purpose. The installation has been carefully studied and photographed for the Improvement Association of Chicago, who have recently described it in their journal, *Improvement*, which deals principally with conveying equipment. The data and photographs in this article are used with the kind permission of the editors of that journal.

The system at Willoughby was designed to save as much time and labor as possible in getting chemicals and compounding ingredients from the bins to the mixers. This has been worked out so that what is frequently an arduous and unpleasant task is made a rather easy and certainly a speedy one.

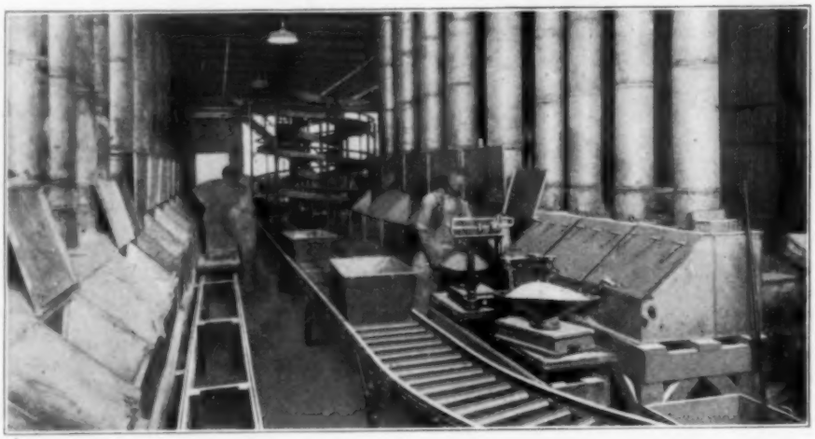


FIG. 1—*Chemicals are fed into the storage bins from the floor above by means of the supply pipes. The scales move along on special tracks to facilitate weighing. After the chemicals are weighed, they are transferred to the batch boxes on the conveyor line and the boxes move forward until the batch is complete. Then they start on their automatic journey to the mixers. In the background is seen the spiral which returned the empty boxes from the floor above*

A long double row of bins marks the starting point of the efficient conveying system. These bins are kept filled by means of supply pipes from upper floors where the bags or barrels of materials are opened. This assures the compounders a convenient and ample supply of everything the formulae will call for.

Weighing is done by means of movable scales which run on specially constructed tracks in front of the bins. One or more compounders can work on each side of the conveyor line which runs between the rows of bins. Each compounder proceeds from bin to bin, pushing the scales in front of him so that he has to transfer the material the shortest possible distance. The batch boxes move along on the conveyor line at the same time so that after the weighing is done the compounder can transfer the chemical from the scales to the box without taking a single step.

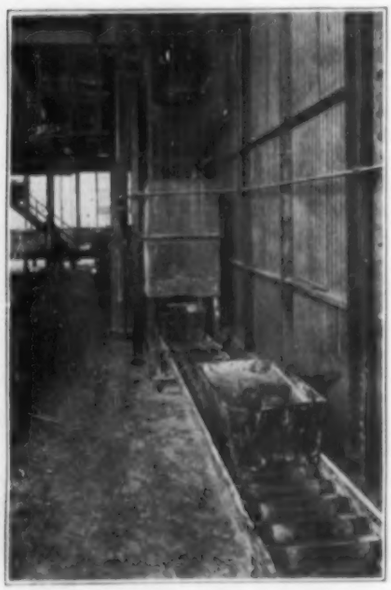


FIG. 2—*Here the loaded batch boxes are about to ride onto the automatic hoist or elevator which will carry them to the floor above*

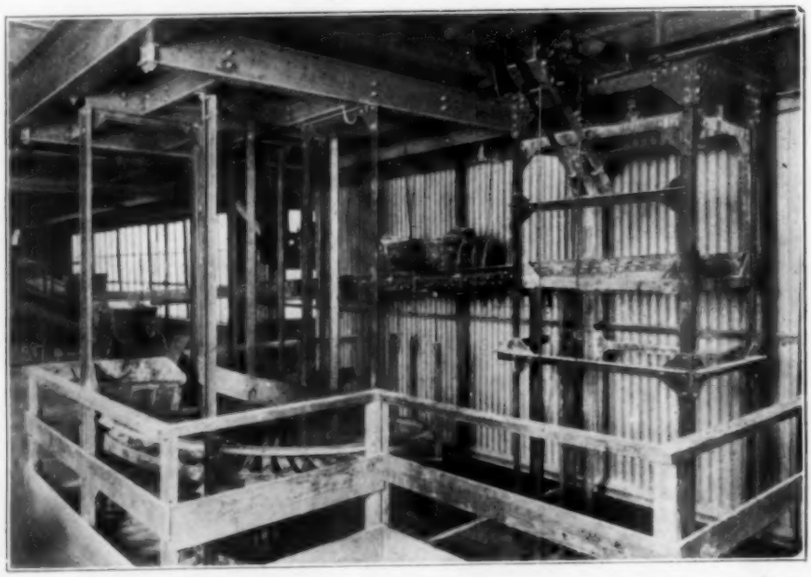


FIG. 3—*At the top of the automatic hoist or elevator, the batch boxes are automatically fed onto a gravity line and started toward the mixers. The elevator is at the extreme right. In the left foreground is seen the top of the spiral which returns the empty boxes to the lower floor*

When the required number of chemicals have been placed in the batch box, a slight touch by one of the compounding men sends it down the conveyor to a point where other workers are ready to add the crude rubber and other solids which the formula calls for. When this is done, another slight push sends it farther down the track to an automatic hoist. Then, with a click, the box rides onto the hoist or elevator which automatically carries it direct to the second floor.

At the top of the hoist the box is automatically moved onto a gravity conveyor line. Again the box rides along of its own weight until it becomes necessary to raise the level to a sub-floor. This is accomplished by a power booster in the form of a belt conveyor and the box is quickly carried to the new height. This conveyor (shown prominently in Fig. 4) delivers the batch box onto another gravity conveyor down which it rides to the mixing mills.

Having taken the loaded batch boxes automatically all the way from the compounders to the mixers, it is just as necessary to efficiency that the empties be returned automatically to be refilled, and this has also been taken care of in the Willoughby installation.

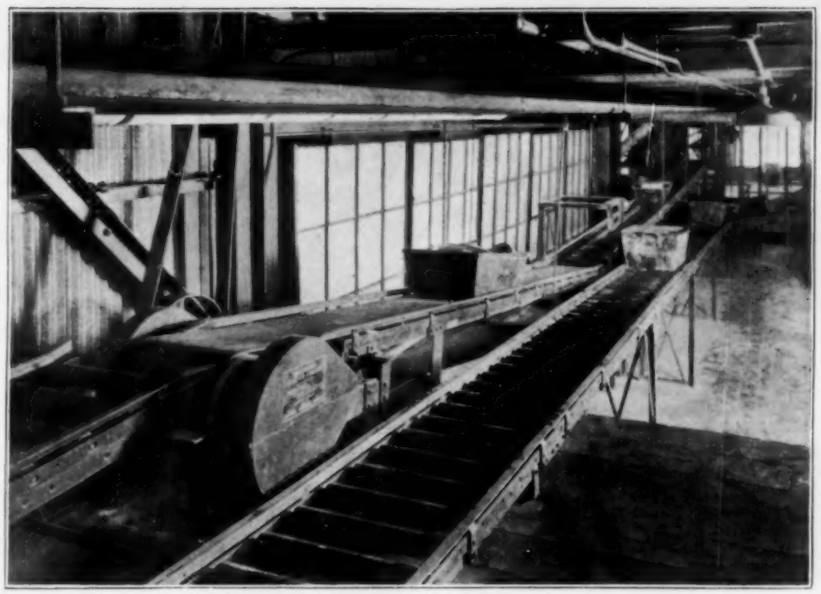


FIG. 4—*View on the upper floor. The conveyor line on the inside begins at the top of the elevator in the background and carries the batch boxes, with the aid of the power booster, to the mixers which are off to the left, not seen in the photo. The outside line shows empty batch boxes returning from the mixers on their way to the spiral in which they will descend to the lower floor*

After the boxes are emptied at the mixers, they are set back onto a gravity conveyor which runs parallel to, but in an opposite direction, to the incoming conveyor on the second floor. The empty boxes ride down this conveyor until they come to a spiral adjacent to the automatic hoist which previously raised them from the lower floor. Still impelled by their own weight, they move down this spiral until they are in the room below.

In the Willoughby plant the spiral does not continue all the way to the first floor but is broken by means of a straight-away as seen in Fig. 5. The second part of the spiral delivers the boxes at the head of the compounding line, ready to start down between the bins again. The second section of the spiral can be used as a storage for the empty batch boxes, as was being done when Fig. 6 was photographed. It will be seen, however, that an empty box is always ready to move out onto the compounding line at the touch of a compounder's hand.

The installation of this conveyor system has proven a great aid in speeding up production at the Ohio Rubber Company. When batch boxes were handled by human labor the cost of compounding was many times higher and not nearly so rapid.

Two or three men loading and one or two emptying can maintain an almost unbroken line of raw materials passing into the manufacturing processes. Without the conveyor system, deliveries to the upper floor would be uncertain and, at times, there would be a scarcity of empty batch boxes in the compounding department.

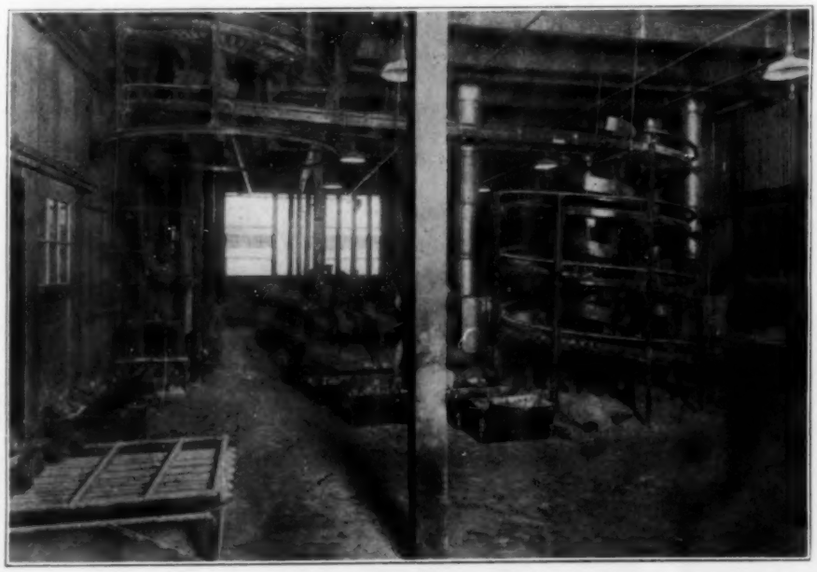


FIG. 5—*To save floor space, the spiral which returns the empty batch boxes to the lower floor was split by an overhead straight-away, as shown in this view. The lower part of the spiral is located at the head of the compounding line and sends the boxes back in front of the bins to be refilled, thus completing the round trip. The automatic hoist which lifts loaded boxes to the upper floor is seen at the left*

FIG. 6—*Boxes ready to leave the lower part of the spiral onto the conveyor line which runs in front of the bins. Boxes can be stored in the spiral if desired*

Hevea Trees Bordering Roadway on Manhattan Estate

History and P
The Manhattan R

This Property Is the Only American Owned Begun In 1908—The Manufacturing Company 10 Per Cent of Their Total Crude Rubber

By HAMILTON ABERT, *Secretary*

WHILE interest has only recently been aroused in the proposition for America to grow its own rubber, it is interesting to note that at least one large American rubber manufacturing company has been going quietly forward with a plantation project begun twenty years ago in Java and today is still planning some expansions year by year in an endeavor to assure itself of an economical crude rubber supply which can be counted upon at all times, irrespective of market conditions and restrictive export regulations.

As far back as 1908 the Manhattan Rubber Manufacturing Company, of Passaic, N. J., one of the largest manufacturers of mechanical rubber goods in the world, opened up a few acres of jungle in the heart of the Dutch East Indies and has gradually developed and expanded its holdings until today the area under rubber cultivation and producing totals 1,500 acres with an additional 300 acres in prospect of planting. Measured by other estates in the Far East, the area is not large and the total output of crude rubber from the holdings only supplies ten per cent of the company's annual requirements, but the project is an excellent performance along the lines of policy now holding the attention of the American rubber manufacturing industry and an accomplishment long in advance of what is now being contemplated by the others in the industry.

The properties originally consisted of two separate plantation estates three miles apart which have now been merged into one for administrative purposes but still maintained as two distinct units from the standpoint of management and operation.

The area lies 78 miles southwest of Batavia or 18 miles due south of Rangkasbetoeng, the junction point of the railroad, and is indicated on the accompanying map. The estates were formerly named Lebak and Tjikapek but the former has since been changed to Koppo. The trip from Batavia to Rangkasbetoeng by railroad takes three hours, from which point the plantation estates are reached by motor road.

The entire output of the plantations is taken by The Manhattan Rubber Manufacturing Company under contract, at a price corresponding to the current market price for crude rubber in New York on the dates of arrival of the individual shipments.

The management of the plantations is handled by the Manhattan Rubber Company through a local Dutch staff, directly supervised by Tiedeman van Kercheim, the well-known estates agents in the Dutch East Indies.

The present local staff is composed of J. E. van Bloemen-Waanders, whose senior assistant is J. W. H. von Lookren. The other assistants are Messrs. Hegge Zynen, Wardenaar and Zadeling.

The rubber produced on the estates is pale crepe of high quality with a certain amount of rolled brown crepe and bark scrap rubber. The plants and equipment are of up-to-date design and there is adequate power for all purposes.

No botanical research or experimental work such as bud grafting is being specialized in by the immediate staff but the estates agents maintain a scientific and botanical research department within their organization, the benefits of which are put into practice or made avilable to all the plantations which they supervise.

Under the laws of land tenure in this section of Java, the lands are held under direct lease from the government for 75 years at a nominal rental which does not start until

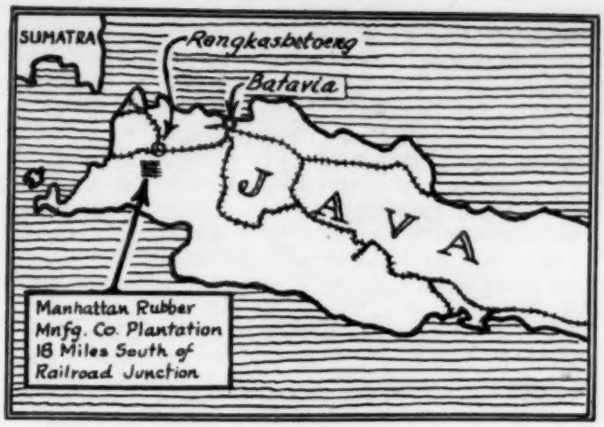
Above—New Coagulating Room on Manhattan Estate; Drying Shed Is Shown in Rear

Left—Paying Porch and Outbuildings. The Paying Porch Is an Extension of the Manager's House.

Progress of Rubber Estate

Rubber Plantation in Java—Operations Were Takes Entire Output Which Is Estimated at Requirements—Is Managed by Dutch Staff.

The Manhattan Rubber Mfg. Co.



Map Showing Location of Manhattan Estate

five years after the grant has been made in order to give the plantation time to get into production.

The total area of the properties is 1,803 acres made up as follows:

Total area in production	1,155 acres
Planted, but non-producing	333 acres
Recently acquired for development	315 acres
Total	1,803 acres

The total production for 1927 will be approximately 168,500 kilos. Production has been running in the neighborhood of this figure for the last few years. Production costs have been kept low and are considered very satisfactory.

The cover crops used has chiefly been the Clitoria (Canajifolium), a green fertilizer, which is planted in hedge form between each row of trees and running in each direction.

The topography of the properties is rolling and hilly which has afforded good drainage. The rainfall is heavy and adequate.

The stand of trees per bouw (1.75 acres) is as follows:

18-19 year old sections	126
16 " " "	113
15 " " "	119
14 " " "	120
11 " " "	148
8 " " "	149
7 " " "	208
6 " " "	171

The above planting seems to satisfy the management with the exception of the last two which will doubtless be thinned out.

The estate is comparatively free from diseases but is troubled to a mild extent with the unual run such as mildew, striped canker, mouldy rot, brown bast, etc. In each case, however, the trees have completely recovered under treatment.

The factory layout and equipment on the estate consists briefly of the usual buildings, drying shed, factory and coagulating sheds. The drying shed is a large corrugated iron and steel building on a concrete foundation. About seven feet from the ground and running the entire length of both sides of the building is an eighteen-inch opening, covered with wire, and on the roof there is another opening which runs from one end of the building to the other. These are both protected so as to keep out rain and sunshine, on the side by a projecting ledge of corrugated iron about a foot wide, and on the roof by a half round piece of metal like a super-roof. These two vents and the doors of the building are the only openings.

The effect of this construction is similar to the thermo-syphon system. The air near the roof being heated by the sun, rises and passes out at the top, and additional air is sucked in through the long vents on the sides. This keeps the air constantly circulating so that the sheets of rubber stir in the draught caused by the suction.

Connected with the drying shed by a covered passage is the factory, another corrugated iron structure. The equipment in this consists of a 35 HP Brons motor, driving three smooth grinders and one ribbed grinder, and from a pulley on the main shaft runs a belt driving a small ribbed grinder through which is passed the sheets. Another 35 HP Brons motor drives one ribbed and two smooth grinders with foundations built for a third if needed.

The 220 volt 24 ampere dynamo is driven by an 8 HP Brons and supplies power during the day to drive the small electric motor pump which is situated about three

(*Continued on Next Page*)

***Above*—Main Street in one of the Kampongs or Native Villages on the Manhattan Estate.**

***Right*—View Showing Upper Kampong Back of the Estate Manager's House**

hundred feet from the factory on the banks of a small stream. This pumps into an iron tank and is an auxiliary supply. It is this dynamo which also supplies the plantation with light. The big pumping station is a mile from the factory on the bank of the river. The motor used there is a 10-12 HP Brons connected by a belt to a three-plunger pump. The greatest lift is about 370 feet. The highest point is vented and from there to the factory the water flows by gravity.

On the side of the factory is the coagulating room. This is 60 feet by 120 feet with a cement floor, brick and plaster walls and a corrugated iron roof supported by steel trusses.

There are several kampongs or native villages on the property at distant intervals so that the tappers can be near their working area.

The labor is chiefly Soendanese. Lately there has been a shortage of labor and it has been necessary for the manager to put into effect a form of piece work. Each tapper gets a daily wage of forty cents (Dutch currency) plus a monthly premium of seven and one-half cents for each ten liters of latex brought in, subject to fines for careless work, wounds to trees, etc. The system seems to be popular with the tappers and has been effective in securing larger crops.

The development of further areas are contemplated within the next two years.

Rubber at the Automobile Show

(*Continued from page* 413)

another decided asset. The warmth of hard rubber to the touch, as compared with wood, is claimed as an advantage in winter driving.

The hard rubber wheels are moulded with attractive and useful markings, such as rib markings on top and depressions on the under side to fit the fingers. Other parts are also made to be used along with the hard rubber wheels. These include horn buttons, rubber covered levers and decorative caps to cover the hub of the wheels.

A molded rubber steering wheel has been used on the Ford car for some time and is being continued on the new models. It is understood that this wheel is made in the Ford factories. It differs from the Husted wheel in that two different rubber compounds are used in its construction. The steel frame is first covered with a compound in which considerable filler is used and a covering of different composition is then applied. This molded material is known as Fordite. Judging from the wheels on the cars shown at Madison Square Garden, no effort is made to get an extremely high polish on the Fordite wheels, although they are very attractive. A brownish color instead of black is used.

According to patent No. 1,642,666 on the Fordite wheel which was taken out by C. W. Avery, former Ford superintendent, the core and outside covering have compositions as follows:

THE CORE	*Per Cent by weight*	*THE COVER*	*Per Cent by weight*
Pale crepe	11.45	Smoked sheet	27.05
Brown crepe	7.60	Reclaimed rubber	3.75
Reclaimed rubber	14.25	Bitumen	12.30
Bitumen	18.10	Ground waste rubber	7.50
Hydrated lime	4.80	Hydrated lime	2.45
Sulphur	6.20	Litharge	4.65
Ground straw and excelsior	30.00	Sulphur	10.70
Inert filler	7.60	Inert filler	6.65
		Lead oleate	0.65
		Ground asbestos	23.65
		Carbon black	0.65

The use of rubber in cushioning and silencing of motor cars appears to be steadily gaining ground. Rubber engine mounts are being widely adopted. Oldsmobile and Reo were among the companies stressing the value of such cushioning. Others such as Chrysler were emphasizing the advantages of rubber spring shackles. These developments have been described in past issues of THE RUBBER AGE. No revolutionary changes appeared to have been made in such rubber parts, but there is a tendency toward their universal acceptance.

The use of rubber in connection with the interior finish of closed cars is also progressing rapidly. Rubber flashing is used to make doors fit snugly and to prevent rattle. Upholstery covered mouldings, in which rubber is inserted, are used in finishing interiors. Drip moulding, in which rubber has replaced metal is now used on many cars. This is shown in one of the accompanying illustrations.

Rubber also played its part in the accessories section at the New York Show. Rubber cushions made their appearance in the Wahl spring brake or shock absorber. This appears to be a natural development and extra cushioning of the car is claimed by the manufacturers as an advantage. Most shock absorbers used in the past have been entirely metal.

The Wedler-Shuford Company of St. Louis, had on display an assortment of their Wedford Kex rubber plugs for tire repair. The new Wedford rim seal, recently described in THE RUBBER AGE, was also displayed. The Cactus Manufacturing Company of Los Angeles, showed their line of tire boots. The Okonite Company of Passaic, had a display of their rubber covered cord for use in automobiles and in garages.

As usual, tire manufacturers were totally unrepresented. Several years ago the Rubber Association voted for non-participation in the automobile shows. Occasionally a non-member of the Association has had a tire display, but this year even that was lacking.

Services of the Rubber Division

THE Rubber Division of the Bureau of Foreign and Domestic Commerce, Department of Commerce, Washington, D. C., has recently distributed a small pamphlet describing the various services it is prepared to render to the different branches of the rubber industry.

While the primary function of the Rubber Division is the dissemination of information to the industry with a view to promoting export trade in American rubber manufactured goods, it also offers material aids to the crude rubber brokers and importers through the publication of import trade figures and its service even entends to the domestic jobbers and retailers of tires, through the semi-annual publication of tire dealers' stocks.

Information relative to foreign markets for American rubber goods, export figures of other countries showing their foreign business in competitive rubber goods lines and the general news and statistics of the crude rubber trade of the world is offered by the Division and is sent automatically to American manufacturers and exporters formally registered with the Department of Commerce. This service is supplemented from time to time by the issuance of foreign trade manuals, covering the export market conditions in specific territories for various classes of rubber goods and by the publication of bulletins and reports on special subjects of interest to the rubber trade in general, prepared by the Bureau's foreign service staff or consular officers abroad.

Through an arrangement with the Rubber Association of America, its board of directors acts as an advisory committee to the Department of Commerce and cooperates with the Department on matters affecting particular sections of the industry.

Mail Order Houses Make Drive for Winter Tire Business

The Two Leading Mail Order Firms in the United States Are Now the Nation's Largest Retail Tire Dealers— Mid-Winter Catalogs Show Big Cuts

THE winter drive for tire business on the part of the mail order houses has begun with the appearance of new mid-winter "flyer" catalogs from the two leading houses in the mail order trade.

Tires are shipped from the big mail order houses to practically every part of the United States but while such business is not concentrated in any specific locality to the extent of cutting materially into the jobbers' or retail tire dealers' trade, in the aggregate the number of tires sold by mail order houses runs to astonishing figures. In 16 years of tire selling, Montgomery Ward & Company claim to have distributed 16,000,000 of their "Riverside" brand alone and Sears, Roebuck & Company only recently claimed 1,000,000 present users of their brands of tires. With these figures representing potential sales it can be well claimed in the case of these two mail order houses that they have developed into the world's greatest tire dealers.

The mail order house fills an important place in merchandising goods to the small and often isolated purchaser and as regards tires, it particularly serves many small car owners in rural districts. Despite the generally prevailing belief to the contrary, the mail order houses of repute do not confine themselves to low grade goods, seconds and "cheap" merchandise in the sense of poor quality goods, although in many cases the merchandise may not and is not expected to represent the highest grade, quality or strength.

Mail order tires are no exception to the rule. They are not expected to stand up to the same strain and wear of the best makes of well-known companies. On the other hand, the leading tire brands offered by the larger mail order houses are well constructed and are sold with specific guarantees as to mileage. Sears, Roebuck & Company sell their leading "Allstate" line of tires with a guarantee against defects in workmanship and material for 12,000 miles and have received so many testimonials from users who have received service from the tires far in excess of the guaranteed mileage that the company has recently been prompted to organize the "Allstate 25,000 Mile Tire Club." A handsome bronze plaque suitable as a radiator ornament is presented to all members who certify that they have been able to get 25,000 miles out of their Sears, Roebuck tires! The "Riverside" cord tires put out by Montgomery Ward & Company are sold on an 8,000 mile guarantee of the same kind.

The "Allstate" tire was first put on the market by Sears, Roebuck & Company in 1926, superceding the "Justice" tire which had also been a big success. Not only does the new line carry the mileage guarantee but so much faith has the company in their line that the offer is made to sell the tire on a 30-day trial basis. The prices now offered by the mid-winter "flyer" catalog are for a limited time only. The sale closes February 29, 1928.

The second line of tires put out by Sears, Roebuck & Company are called the Dearborn cords and balloons and carry a guarantee of 8,000 miles. A still lower priced line for the old model Ford and Chevrolet, the 29 x 4.40 size and carrying a 60-day guarantee, is the Argosy tire.

The Montgomery Ward & Company line of tires is equally as large and embraces various quality grades. An equally large mail order business is done in inner tubes. Both companies also offer truck and bus tires in various sizes.

The scale of prices on mail order tires is claimed to permit a saving of from $5 to $20 a tire as compared with prices of other high grade tires in the same class and a saving of $15 or more a year to owners of light cars or $65 to owners of heavy cars. The low prices quoted are made possible only by the huge volume of unit sales at a small profit over manufacturing costs, direct to users, which eliminates much of the usual overhead and selling expense. The current price lists are claimed to represent the lowest prices in 16 years of tire selling by mail.

Montgomery Ward & Company are offering the "Leader" tire with a 5,000-mile guarantee at $4.39 for the 30 x 3½ clincher cord and $5.75 for the 29 x 4.40 balloon. Sears, Roebuck & Company, in a comparative grade, are offering the "Argosy" tire at $4.45 for the clincher cord and $5.75 for the balloon.

Reductions are also announced in the "Wardwear" line of tires of Montgomery Ward & Company. This line, of which, it is claimed, more than 250,000 have been sold in less than a year, was only recently introduced by the company "to settle all arguments about low priced tires," according to the introductory statement of the company. On three sizes of clincher cords the prices range from $5.45 to $5.89; on four sizes

(*Turn to page* 424)

Pages From the Mid-Winter "Flyer" Catalogs of the Two Leading Mail Order Houses Offering Reduced Prices on Tires

No. 5 of a Series of Articles on

Purchasing Supplies for the Rubber Factory

Buying Cartons and Containers

All of the Many Types of Patented Packages Have Advantages and Careful Choice is Necessary—Economies May Be Effected by Use of Automatic Machines and by Timely Purchasing

THE package in rubber merchandising has several functions which are in the main, applicable to all products. The first of these is utility; the second is advertising or sales appeal. In covering this subject it is necessary to differentiate between the outside packages known as the container or case, and the individual package known as the carton.

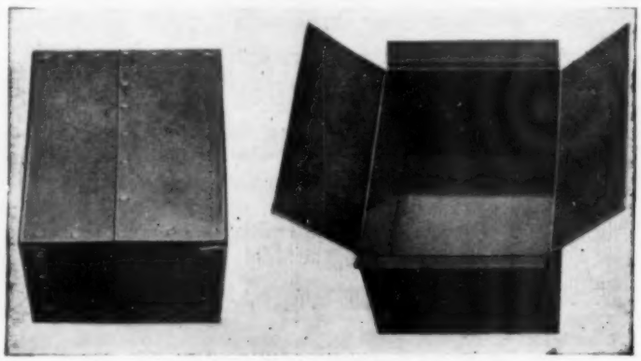
Before adopting or laying out a program on containers and cartons, the purchasing agent must get complete data on size and weight of product, unit of purchase, sale conditions (does the consumer see the package?), volume of production (to determine whether it is cheaper to buy completely assembled or make in his own plant), cost and selling price of product (to make container and carton cost in proper proportion) and storage, shipping, and handling conditions.

Tremendous savings have been made during the last ten years in outside containers by eliminating the wooden case or crate in favor of the fibre or corrugated case. These savings are effected not only in the lower price paid for the container, but also in freight, handling, and storage charges.

In the rubber industry, paper cases are used largely in packing footwear, inner tubes, heels and soles, and sundries, whereas wooden cases made from shooks or plywood are used for raincoats, heavy mechanical goods, export footwear and heavy footwear such as boots. Tires are bundled with either rope, paper or wire. It pays the buyer to study his packing requirements thoroughly, soliciting the aid and advice of the railroads and common carriers, wooden box manufacturers, and makers of solid fibre and corrugated cases, as well as the ultimate consumer of his product.

A Group of Fibre Containers of the Kind Suitable for Packing Rubber Footwear

In considering solid fibre and corrugated cases it is essential to understand the difference and purpose of the two types. Solid fibre is made from kraft sheet plied up with adhesives into a solid sheet, generally made in three thicknesses, 80 point, 100 point, and 120 point. It is used for heavier types of merchandise and, owing to the schedule of manufacture, four to five weeks is the normal time required to fill an order except in special instances. Advertising is printed on this type of container from metal plates. The corrugated case is made with a strawboard center which, as the name suggests, is corrugated on a corrugating machine, enclosed between plies of jute sheet, held together by an adhesive.



Bliss Case Sealed by Wire Stitching With Flaps Meeting in Center

Corrugated stock acts as a cushion to the shocks of transit and is used generally by department stores on delicate goods of a breakable nature, and in the rubber trade is used generally for small cases of light goods. It will not stand the load carried by solid fibre, is generally lower in price, and can be obtained in shorter delivery time, usually a week to ten days.

Classification of Corrugated Stock

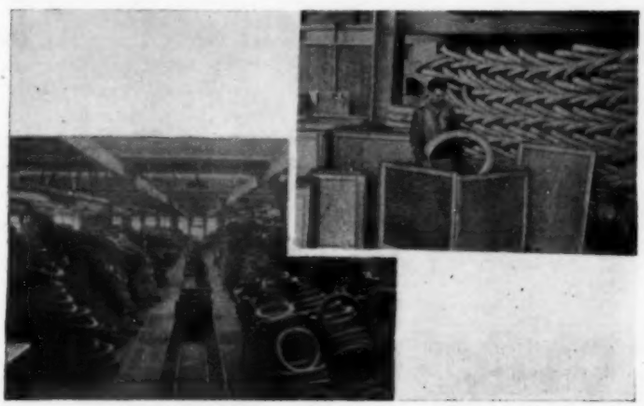
Corrugated stock is generally classified by the Mullen test (a machine designed to test the bursting pounds puncture pressure per square inch of cases into 175-lb., so-called non-test stock, 200 lb. and 275 lbs. The 200 test corrugated compares to 80 point fibre, and 275 test corrugated to 100 point and 120 point fibre. The 175 test corrugated has a dimension limit of 60 inches and a gross weight limit of 40 pounds according to the consolidated freight clas-

sification. The 200 test corrugated has a dimension limit of 65 inches and a gross weight limit of 65 lbs, whereas 275 test has a dimension limit of 70 inches and a gross weight limit of 90 pounds.

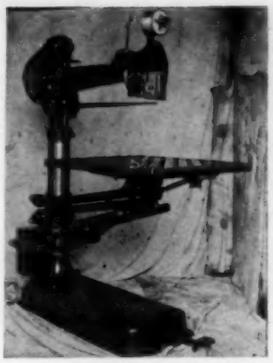
When the specification of fibre or corrugated container has been determined, the next step is to work out the type of container and the method of sealing. Perhaps the most common type is known as the regular slotted container, which is made up from one piece of stock joined along one of the vertical corners with heavy tape in the case of corrugated and stitching wire in the case of fibre. These containers are shipped flat and must be erected before use and finally sealed before shipment.

In the regular slotted container, the flaps at top and bottom just meet or butt, and sealing is effected by applying adhesive, usually silicate of soda, to the end flaps, or by using ordinary kraft sealing tape which is moistened before application by automatic sealing machines designed for that purpose. This is the common way of sealing a case, especially if it has to be re-opened at a factory branch before shipment to the ultimate consumer.

If shipments are made from the factory direct to customers, it is often advantageous to wire stitch the tops and bottoms of cases. Special machines are on the market which do this work very efficiently and without the more or less messy condition which the use of silicate brings about, although sealing machines for sealing silicated boxes under pressure work out very well. If the manufacturer desires to wire stitch his cases, the regular slotted case must be redesigned with an overlap of one or two inches at the top or bottom to take care of this row of stitching.



Lower View Shows Plywood Boxes on Conveyor Passing Through Tire Stockroom—Upper View Shows Tires Being Packed for Shipment in Plywood Boxes



Morrison Wire Sealing Machine for Cartons

Bliss Top and Bottom Wire Stitcher for Cartons

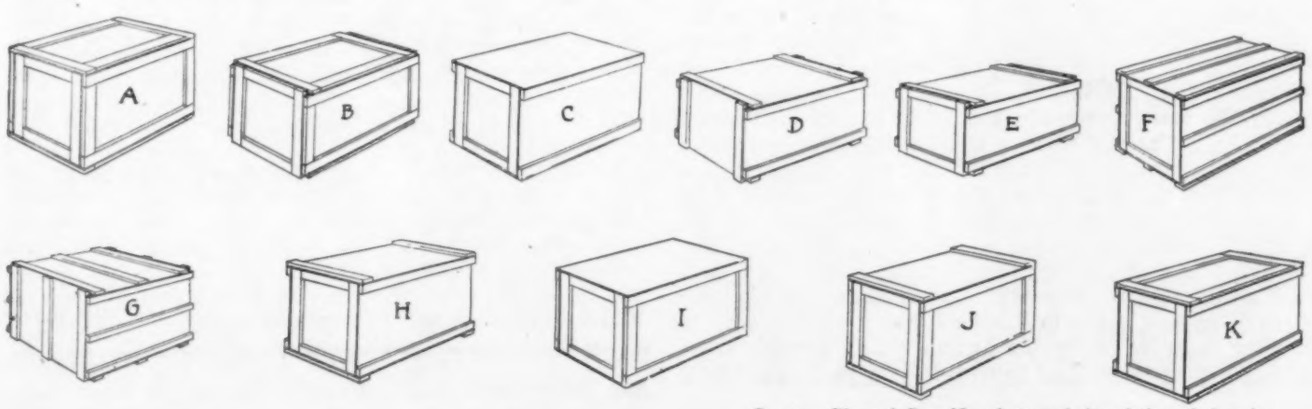
In recent years a new type of solid fibre case has been introduced which has many advantages. This is known as the Bliss case. It is constructed from three separate pieces instead of one as in the slotted container. These are the body sheet, which makes up the bottom, sides and top of the container, and two end sheets which are joined to make the case in the assembly.

The buyer should not overlook the possibilities of using corrugated sheet to aid in packing. As reinforcing inside a fibre or corrugated case, it helps rigidity in packing bulk goods, and it is often used separately, for example in shipping carloads of hard rubber battery cases as a cushion between the units.

In wooden containers, many manufacturers buy lumber in carloads and assemble their own cases on nailing machines which is a very simple operation. This practice pays if there is volume enough to warrant it. Plywood cases are very satisfactory for large bulk shipments of raincoats, hospital sheeting, and goods of that character.

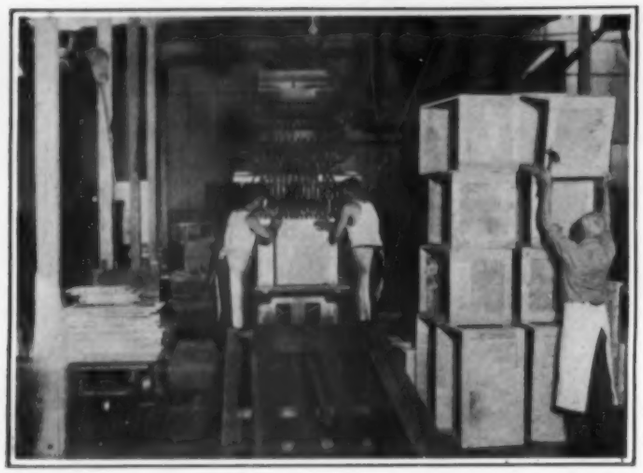
From the outside container we pass on to the individual package or carton. Here again the buyer has the choice of two types, the folding box, or the set-up box. The folding box is much cheaper to buy as it is made from coated stock (chip board back coated with manila or smooth face to take printing) and is produced at a high rate of speed. The blanks are cut out and printed and fed into a gluing machine which assembles the carton at high speed, production of 120,000 pieces per day being not unusual on one machine. This type of carton is used for inner tubes on cheaper brands, rubber bands, bathing shoes and caps, and for various rubber specialties.

Set-up boxes are made with a box and lid as distinguished from the folding box which is made of one piece



Courtesy Plywood Box Manufacturers' Association of America.

Standard styles of plywood boxes, carefully designed and worked out to meet the needs of various types of merchandise. Depending on the size, weight and character of merchandise, one of these styles generally will suit any shipper's needs



Assembling Atlas Plywood Cases With a Machine Nailer—Plywood Cases May Be Assembled Either by Hand or by Machine

and tucks in at the ends. Set-up boxes are used largely for footwear and consist of several different types. They may be made from coated or combined board, and set up on a Brightwood or International machine which takes the cut out blank and makes the completed box or lid by joining the ends of the box and the corners of the lids with hot glue or cold adhesive. The common type which the commercial box maker supplies is made on a Kingsbury Davis for the box, and a Stokes and Smith for the lid from chip stock, after which the box and lid are covered with white coated paper, giving it a more finished appearance. The latest method of cutting out the blanks for this process is by creasing instead of scoring, which has made this type of carton much stronger.

For manufacturers who have long runs of one size, several new automatic machines are on the market which make continuous runs of 15,000 to 20,000 per day, making the entire carton on one operation. In fact, when the manufacturer's carton requirements reach 10,000 or more daily, it is time for him to look into the possibility of operating his own plant, as there are savings in first cost to be made, besides the advantages to be gained of positive deliveries and service.

Standardization of Sizes Helpful

The buyer should consolidate sizes wherever possible as the multiplicity of them adds to the cost of containers not only to himself, but to his competitors as well. There is much room for standardization of sizes in containers in different branches of the industry, and already the Rubber Association has started work along these lines. In buying cases by the carload, which is the most economical method if consumption is at all steady, the purchasing agent should follow the board markets closely. Prices are usually easier during the summer months than they are in the winter. This is logical as raw stock, such as waste paper gravitates to suppliers more easily in the summer months than it does in the winter and is therefore cheaper in price at that time.

In buying corrugated, the nearby supplier is usually the most satisfactory on account of delivery. But solid fibre case manufacturers, being much fewer in number, are scattered more widely. Western manufacturers are big suppliers of eastern users, in this field, and it usually pays to consider them in asking for quotations, as carloads come through regularly on four to five day shipping schedule.

Editor's Note: This is the fifth and last of a series of articles on purchasing supplies for the rubber factory. Prior articles covered fabrics, rubber, machinery and chemicals. Copies of issues containing these articles may be secured from the publishers.

Schaphorst's CHATS *with the* ENGINEER

By W. F. SCHAPHORST, M.E.

Setting Boilers Near the Fire

NOT long ago I read a complaint by an engineer regarding modern boilers being set too high. He thinks we are overdoing a good thing and that boilers should be set lower. It reminded me of a letter I once wrote purely in a spirit of fun, suggesting that boilers be placed right down in the live coals because "that is where the heat is most intense." At least that is the argument I used. I pointed out that when a blacksmith proceeds to do a job of welding he doesn't place his iron several feet above the fire but he places the iron directly "in" the fire because it has been his experince that "in" the fire is where the fire is hottest. Therefore, I concluded, "there should be no space between the live coals and the boilers but the boilers should be buried in live coals."

After the publication of this letter, which I intended to be humorous, I received a personal letter from a gentleman who claimed to be an inventor. He wrote me very seriously that he had had that same idea himself and was working on it but that a colored man who was in his employ left his service and he imagined that the colored man had imparted the idea to me and therefore the idea was still his own and was still patentable in spite of my description of it. I do not claim any patent rights. If the idea is patentable, any reader is welcome to it. I am pretty sure I don't want it.

My honest opinion is that there is little danger of placing boilers too high above the grates. It is logical that space is needed so that combustion will be complete before the boiler surface is touched by the hot gases. It is better to place the boiler too high than too low. If the boiler is too high, by several feet, it simply means that the boiler walls must be sufficiently well made so that the heat losses will be reduced to the minimum and so that there will be no inleakage of air. If the boiler walls can be constructed so well that there are no heat losses whatever and so that there is no inleakage of air, there is practically no limit to the height to which the boiler may be placed without loss of efficiency.

There are so many factors that enter into furnace heat transfer that it is quite possible to get poorer evaporation even with better combustion. Good combustion cannot overcome the evils of soot and scale. Nor can good combustion overcome a great many other things which would require considerable space here and which are well known to most engineers.

Plain Bearings

The purchaser of high grade machinery should see to it that no plain bearing in any machine is subjected to a load greater than 2500 lbs. per sq: inch. That, remember, is the very maximum. For ordinary operation keep the load below 1500 lbs. per sq. inch, and you can be pretty sure of long service provided the correct babbitt metal is used and provided the bearings are properly lubricated.

Mr. Schaphorst's Contributions Appear in Each Issue of THE RUBBER AGE. Discussion from Interested Readers is Invited. Suggestions for Future Chats Welcomed.

THE GENTLEMAN FROM MINCING LANE
reports current opinion in London's famous rubber market in every issue of THE RUBBER AGE

The London Letter

The Gentleman Studies the Outlook for British Industry

LONDON, 12th January, 1928.

ONCE more we attempt to put the world into a walnut-shell," writes J. L. Garvin in *The Observer* when casting his eye over Britain and the present state of her world interests. And he finds that 1927 represents, to his Celtic mind, a "year of lost chances." The solid Anglo-Saxon Government of the day has less of a sprinkling of Celtic pepper in it than usual. There are no Lloyd Georges or Ramsey McDonalds so, though "Unionist-Conservative" is his label, so far as he wears one, Mr. Garvin feels the lack of ginger in Mr. Baldwin's Government. The "Celtic fringe"—Scotland, Wales, and Ireland—have contributed this quality to British Governments for some years back.

Instead of starting with the *spirit* of co-operation, the nation spent the early months of 1927, after the disastrous strikes of 1926, in repairing the *letter* of the law, aiming to make future general strikes illegal. It was only at the end of the year that Sir Alfred Mond and a large group of representative employers invited the General Council of the Trade Union Congress to a round-table discussion in an endeavor to develop a new spirit in industry and to induce employers and employees to join in putting British world trade back on its feet. So runs Mr. Garvin's argument.

He is probably wrong from the American point of view. Individual initiative must continue to be the real driving force in commercial-industrial success. During the war European nations over-developed the habit of depending on Governments. The strikes of 1926 probably did much to finish breaking-up this attitude of mind. It is unfortunate that Sir Alfred's invitation could not have been sent January 1, 1927, instead of December 1—and to the extent that the trade disputes legislation delayed it, Mr. Garvin is right in blaming the Government—but these things shape slowly and a variety of factors have played their part, such as the loss of 600,000 picked young Britons in the war, the reduced world purchasing power for British and other goods, etc.

A MONTH ago I wrote you how things looked in the raw rubber trade at the close of the year. A fortnight ago I told you just where we stood in the rubber manufacturing industry. So today I am "taking a squint" at the rest of the British Isles which is quite the proper thing to do about January 1st. Those who indulge in this same pastime every January somehow always confirm the ancient law—"hope springs eternal." Like them, I am (mildly) optimistic as to "tomorrow, tomorrow, tomorrow." It may be that the industrial peace which pervaded the 1927 atmosphere was a "peace of exhaustion," as some aver, but nevertheless the Mond group's invitation to Labor to meet on January 12 suggests the possibility of "a new beginning." At any rate, peace in industry in Britain seems nearer in 1928 than at any time since the Armistice.

Industrially, 1927 presents three stages; the spring and early summer given over to more intensified activity—specially in the basic industries—under the pressure of accrued orders unfilled during the strike. As this piled-up business was disposed of, the summer's seasonal quiet provided a second stage before the fall. Then, in general, British industry found itself again on the same slow up-curve of post-war improvement—an extension of the up-curve of 1923-24 which was interrupted by the coal troubles beginning in the autumn of 1925, and ending late in 1926.

Who would have thought to find, in the tenth year after the Armistice, British industry and trade still struggling with adverse domestic world conditions—over supply and under demand? Stolid, heavy, slow to change, the Britisher may be, but are these not the very admirable qualities to resist such a long depression and to provide ballast to a post-war world most "upheavious!"

HAVING admired our friends' dogged stick-to-itiveness, I find another quality in them which your readers may admire—they appreciate American goods. I find that the sale of American goods in the first nine months of 1927 have held to about the same level as in the previous two years, i.e., in the neighborhood of a billion dollars per annum.

The record of American post-war sales in Britain following the war has been a truly remarkable one. Trade has been continuously depressed in these Islands and yet the American sales total varies but little from year to year. Cotton sales may go down on account of a short crop; wheat sales may go up on account of a long crop or due to other conditions; American manufacturers of specialty products for which America is famous—machinery, electrical household apparatus, etc.—may decide to manufacture their product in Great Britain for one reason or another, thus supplanting the sale of the American-made product; the rapidly growing competition from resuscitated Germany may continue; the weight of the official "Buy British Goods" campaign may increase—in spite of all these things, the American sales total continues to hold steady.

Lines which are lost for one reason or another are replaced by others being introduced for the first time—America inventiveness and ingenuity is always producing something new—and so it goes. The coal troubles of 1926 have evidently weakened the purchasing power of miners, steel workers, cotton weavers and other laborers and yet American sales continue in volume—the largest aggregate movement of goods from one country to another overseas in history.

Thus 1927 goes out and 1928 comes in with the hope that British producers will increase their productivity on an accelerating scale, sell more goods to the world and their own people, and buy more American goods as a result of their increasing wealth.

Yours faithfully,

THE GENTLEMAN FROM MINCING LANE.

Mail Order Winter Tire Sales

(*Continued from page* 419)

of straight side cords from $7.35 to $10.45, and on twelve sizes of balloons from $6.75 to $14.45.

An interesting comparison between the regular fall and winter catalog prices and the new mid-winter "flyer" catalog prices on the Allstate and Dearborn tires of the Sears, Roebuck & Company line is given as follows and shows the extent of the new price reductions:

	Mid-winter "flyer," 1928	Fall and winter 1927-1928
Allstate:		
3 sizes cl. cords	$5.95@$7.15	$6.49@$7.75
13 sizes s. s. cords	8.25@25.25	8.98@25.95
27 sizes full balloons	7.95@25.85	8.65@26.95
6 sizes balloon type	9.75@20.35	10.45@22.50
Dearborn SR:		
3 sizes cl. cords	5.45@ 5.89	5.65@ 6.25
8 sizes s. s. cords	7.25@20.95	7.65@21.25
7 sizes balloons	6.75@12.50	7.35@13.45

Tire manufacturers have been slow to follow the mail order houses in offering very low priced lines in competition, chiefly because of the possible effect on their own higher grade brands, but recently the pressure from dealers, who felt the need of offering some grades to offset the attractive price levels of the mail order houses, has been great enough to bring some of the manufacturers into the low priced field.

The Pennsylvania Rubber Company, for instance, has recently offered the Jeannette line of tires at prices comparable to those of the mail order houses, in accordance with the following scale: 30 x 3 fabric, $5.85; 30 x 3½ cord, $6.95; 29 x 4.40 balloon, $8.35; 32 x 4 cord, $12.80; 31 x 5.25 balloon, $14.75.

A new low priced tire has also been placed on the market by the Goodyear Tire & Rubber Company. It is called the "Speedway" tire and is produced in two sizes, 30 x 3½ and 29 x 4.40. On orders of not less than 25 tires the price to the distributor is $4.75 per tire, which is claimed to permit him to compete with the best of the mail order quotations.

Just what will be the result of the present trend of manufacturers to assist the distributor in meeting the mail order business with equally low priced tires cannot as yet be determined. Likewise, it cannot be foretold whether the lower priced grades in the hands of dealers will react unfavorably on the higher standard qualities, but it can be fairly definitely seen that the tire dealer is determined to make a strenuous effort to hold down the business of the mail order houses as much as possible. In such an effort the element of service to tire users, on which the mail order house is naturally at a disadvantage, will apparently be his strongest point.

PRICES OF SEARS-ROEBUCK BRANDS OF TIRES

Balloons	Allstate	Dearborn	Argosy
29 x 4.40	$8.15	$6.75	$5.75
29 x 4.95	11.95	9.85	——
30 x 4.95	12.65	9.95	——
30 x 5.25	13.75	10.65	——
30 x 5.77	16.85	12.50	——
31 x 4.95	13.35	10.25	——
31 x 5.25	14.25	10.95	——
Cords			
30 x 3½ Clincher	6.65	5.65	4.45
31 x 4 Straight Side	12.15	9.35	——
32 x 4 " "	12.65	9.65	——

Rubber Consumption for 1927 Low

WITH the publication of the December figures covering crude rubber consumption in the United States, the total for the entire year of 1927 presents the low figure of 371,027 tons or approximately only 5,000 tons more than was used by American rubber manufacturers in 1926. In December only 25,492 tons were consumed, the lowest total of any month during the year and even lower than the exceptionally low figure of 26,293 tons used in the same month of 1926.

Rubber Importations Increase in 1927

THE total imports of crude rubber into the United States during 1927 amounted to 432,316 tons, according to the figures compiled by the Rubber Association of America. This total represents an increase of 21,354 tons over the gross imports of 1926, which amounted to 411,962 tons. The figures of the Rubber Association cover only gross imports and do not take re-exports into account.

Of the grand total of crude rubber imported, as reported by the Association, 405,543 tons represented plantation rubber, which figure was also an increase over the total of 386,748 tons coming from plantations in 1926. Para rubber also showed an advance, totaling 17,576 tons as against 13,184 tons in the previous year.

The gross monthly imports of crude rubber by various grades during 1927 and as reported by the Rubber Association were as follows:

CRUDE RUBBER IMPORTS

Month	Plantations	Paras	Africans	Centrals	Guayule	Manicoba and Matto Grosso
January ..	42,646	2,378	269	299	144	..
February .	25,326	1,668	213	203	190	..
March ...	33,114	1,176	206	253	329	..
April	45,843	1,822	351	229	418	10
May	33,735	1,872	197	399	364	2
June	31,444	1,057	123	251	317	2
July	37,060	871	46	388	295	7
August ...	31,195	986	29	504	345	9
September.	31,064	1,117	43	210	364	..
October ..	29,758	1,104	22	158	267	1
November..	38,301	1,368	244	225	423	..
December..	26,057	2,157	330	116	400	2
Totals ..	405,543	17,576	2,073	3,235	3,856	33

GRAND TOTAL—432,316

10 YEARS AGO

Items Reprinted from January 25, 1918, issue of THE RUBBER AGE

United States Fuel Administrator Garfield gave out on January 18 a list of industrial concerns which had been exempted from the operation of the order curtailing the use of coal. The following rubber manufacturers were affected: B. F. Goodrich Co., Goodyear Tire & Rubber Co., Mechanical Rubber Goods Co., Cleveland, and C. Kenyon Co., Brooklyn. All these companies were exempted to allow them to continue to manufacture gas masks of the box respirator type.

* * *

In a letter to Harry S. Vorhis, secretary of the Rubber Association of America, A. C. Read, acting secretary of the Rubber Growers' Association, London, explains his association's step to curtail the output of plantation rubber during 1918 by stating that the sole reason actuating the Council of the Rubber Growers' Association in the action it has taken is to endeavor to prevent an undue accumulation of rubber at the ports of shipment in the Middle and Far East.

* * *

Akron rubber companies were hard hit by the recent holiday enforced by Fuel Administrator Garfield. Only the gas mask and a few other war-goods departments operated at Goodrich and Goodyear. Although thousands of idle men roamed the streets of the Rubber City, no disturbances of any kind were reported. In fact, because all saloons were closed during the workless period, the police court records showed less petty crime than usual.

FINANCIAL NEWS

DAYTON RUBBER ENJOYS BEST YEAR IN HISTORY

Record-Breaking Unit Sales Made During Year—$400,000 Declared in Bonuses and Dividends—Cash on Hand Exceeds Current Accounts.

THE past year of 1927 has proved a banner one for the Dayton Rubber Manufacturing Company, Dayton, Ohio, according to John A. MacMillan, president of the company. Both from the standpoint of profits and the volume of unit sales the year was the best in Dayton's history. Dividends and bonuses to the value of $400,000 were declared and have been distributed during the current month.

According to the following statement of the financial position of the company, the ratio of quick assets to liabilities stands at 9.37 to 1. The statement shows no notes payable. Cash on hand is in excess of all current and accrued accounts.

A large factor in the success over the past year has been the excellent showing made by the fan belt department and in fan belt sales. It is claimed that the company is now supplying 85 per cent of the manufacturers of automobiles, electric refrigerators and washing machines in this country with fan and drive belts.

The following is Dayton's condensed balance sheet and profit and loss statement for the ten months ended October 31, 1927. The final figures have not been made up for the full year but are expected to show proportionate increases in the net figures.

CONSOLIDATED BALANCE SHEET

Assets

Cash	$ 285,909.59
Notes and accounts receivable (less reserve)	1,213,404.89
Inventories (cost or market, whichever lower)	1,143,320.65
Investments	5.100.00
Patents and goodwill	271,715.47
Prepaid and miscellaneous	71,978.07
Property, plant & equip....$2,352,649.65	
Less depreciation reserve.. 1,013,176.38	
	1,339,473.27
Total assets	$4,330,901.94

Liabilities and Capital

Current accounts payable	$ 204,876.62
Accrued accounts (wages, taxes, comm.)	77,062.48
Current notes payable	None
Reserves (contingencies, federal taxes, preferred dividend, etc.)	259,782.74
5-Year serial notes	600,000.00
Preferred stock	1,593,400.00
Surplus	1,595,780.10
Total liabilities and capital	$4,330,901.94

CONSOLIDATED INCOME STATEMENT

Gross profit	$2,335,219.53
Expenses	968,413.74
Operating profit	$1,366,805.79
Other income	23,698.16
Total income	$1,390,503.95
Depreciation, interest, federal taxes, etc.	360,118.95
Net to surplus	$1,030,385.00

New Exchange Members

The following names have been added to the list of members of the New York Rubber Exchange: Robert H. Deneke, of A. Runge & Co., and Otto Ulrik, of Faulkner & Winsor (Rubber), Ltd., both London; Edward B. Germain, of Dunlop Tire & Rubber Corporation, Buffalo; Hutcheson Page, of Rogers Brown & Crocker Bros., Inc.; Tudor J. Simpkins, of John L. Handy, Inc.; Percy S. Weeks, of Weeks, Handy & Co., Inc., and Carroll V. Geran, all four of New York.

RUBBER CO. SHARES DROP FROM NEW PEAKS

Stock transactions in rubber company shares on both the New York and Cleveland exchanges have shown a falling off from the activity they enjoyed during the closing weeks of 1927. While most of the companies have retained the greater part of the gains made, practically all of them have receded from the peak levels.

Firestone common, after reaching 228 has dropped to 213 and Fisk has dropped from 20 to 16¼. There has been an unusual interest in Miller, both in the common and preferred, due primarily to the sudden switch of Goodyear sales experts to the Miller organization, and the common stock reached a new high at 27½ and the preferred at 97.

The high and low figures for 1928 and the closing quotations covering the more active stocks as of January 19 appear in the table on this page.

Late Stock Prices

	Last Price Jan. 19	Last Price Jan. 3	—1928— High	—1928— Low
Ajax	12¾	12	13½	11¾
Firestone	210	225	213	210
do. 6% pfd.	110	108¾	110	108
do. 7% pfd.	110¼	108¾	110¼	108
Fisk	16¼	16⅞	17¾	16⅛
do. 1st pfd.	96¾	91	98	89
General	183	180	190	180
do. pfd.	111	103¼	111	100
Goodrich	89¾	93½	99⅜	86½
do. pfd.	111¾	110½	112	110½
Goodyear Com.	67	67⅝	72½	66
do. pr. pfd.	99	96	99½	96
do. pfd.	120	118	120	100
Hood	42	43	43	42
India	18	16½	22	16
Intercontinental	19⅜	20½	21¾	19¾
Kelly Springfield	23⅛	26	27⅜	22½
do 1st pfd.	76½	78	78	76
do 8% pfd.	79½	78	80¼	78
Lee	18	16¼	20	16
Miller	25	27½	27½	24
do. pfd.	97	92	97½	92
Mohawk	30	20	30	20
do. pfd.	63	55	65	55
Seiberling	40½	38¼	42½	41¼
do. pfd.	105	102	105	102
Star	1½	2½	2½	1
U. S. Rubber	59¼	56¾	63¼	56
do. pfd.	109	104	109⅝	104
U. S. Rubber Reclaiming	16	—	16½	14½
do. pr. pfd.	—	—	—	—
do. series A	—	—	—	—

AJAX RUBBER SHOWS LOSS OVER 10 MONTHS

Statement Lists Deficit at $1,182,114 for Period Ending Oct. 31, 1927—Ajax to Acquire 90% of McClaren—300,000 Additional Shares Listed.

THE Ajax Rubber Company reports a loss for the first ten months of 1927 of $1,182,113, after depreciation and other charges. The consolidated balance sheet, as of October 31, 1927, compares with the preceding calendar year as follows:

ASSETS

	Oct. 31 '27	Dec. 31 '26
Land, bldgs, etc. less depr	$4,356,505	$4,208,847
Goodwill and patents	1,874,875	1,874,875
Cash	1,390,938	331,084
Accounts and notes receivable	2,022,322	2,688,717
Inventories	3,607,776	4,555,552
Investments	43,414	72,983
Deferred charges	290,424	320,110
TOTAL	$13,586,254	$14,052,168

LIABILITIES

Capital	*$10,876,563	$10,474,180
Accounts payable	507,409	1,202,934
Accrd liabilities	184,282	132,254
Sinking fund gold bonds	2,018,000	2,242,800
TOTAL	$13,586,254	$14,052,168

*Represented by 663,000 no par shares.

Application to list 300,000 shares of Ajax common shares was favorably acted upon recently by the Governing Committee of the New York Stock Exchange. It was disclosed by the application that Ajax will acquire not less than 90 per cent of the outstanding capital stock of the McClaren Company and that the Ajax concern have contracted to set aside 50,000 shares of its common stock for purchase by H. L. McClaren, for distribution to managers and employees. Mr. McClaren has the privilege of purchasing the stock at $10 a share at any time on or before December 31, 1929.

The stock, which has been active on the Exchange, has been selling around $12 per share.

GOODRICH OFFERS NEW STOCK TO SHAREHOLDERS

At a special meeting of the board of directors of the B. F. Goodrich Company, at Akron, on January 4, additional financing plans were announced through an offer to the present holders of Goodrich common stock to subscribe for additional stock at $75 per share for each six shares now held as shown by the records of the company at the close of business on January 13, 1928. The right to subscribe for such stock will expire on February 3.

The issue and sale of the stock has been underwritten by the company's bankers. The additional stock, as offered, is from the company's now authorized but unissued common stock without nominal or par value.

WOVEN FIRE HOSE

steam and air-brake hose and similar products are universally made on the De-Laski-Royle Circular Loom.

Size range ½" I.D. to 4¾" O.D.

The hose may be woven hollow or applied as a covering upon any suitable material fed into the loom.

Particulars upon request.

JOHN ROYLE & SONS, Paterson, N. J., U. S. A.

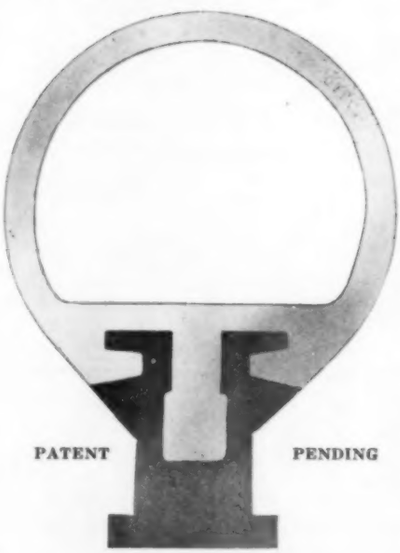
Represented by Akron Rubber Mold & Machine Co.

Modernize Your Core Equipment

With the New BRIDGWATER LIGHT ALLOY CORE SECTION —*the Core which is finding wide favor in leading tire factories.*

It is light in weight, 50% lighter than cast iron or steel. In addition it is more substantial than any cores now in use. It has a base of steel, the use of which eliminates breakage and wear and prevents cutting at the trim line. It is adaptable to any existing type of chuck.

Write for Prices and Full Details



The heavy shaded portion in the above illustration shows the steel tongue casting which means a steel trimming line, elimination of breakage and wear. Cast steel fittings for automatic chucks, clamping rings or other parts.

The BRIDGWATER MACHINE CO.

AKRON, OHIO

EDITORIAL COMMENT

The Din of Friendship

EVERYONE who tried to listen to the speeches or songs at the Rubber Association dinner this year must agree that the disorder which has marred these events for several years has just about reached its peak. More noise could probably have been made, but not without halting the speakers entirely or making it completely impossible for the more quiet guests to hear what was being said. Rubber in itself has so many happy qualities for softening sound that it seems a pity that guests of a Association so interested in that commodity should see so little evidence of those qualities. One might conceive of the steel makers' dinner or the ironmongers' banquet being a riot of din and commotion, but certainly not the chief social function of the leaders of the rubber industry.

For the past few years the Association's dinner committee and directors have realized that one of their hardest tasks, and certainly one of the most unpleasant, was to maintain a semblance of order after the program had begun. The disorderly reception which was accorded the speakers and artists on the last occasion was not due to any lack of appreciation of their abilities, but to the fact that the noise makers found greater pleasure in loud conversation and other entertainment created among themselves. Such so-called "pleasantries," however, bordered at times on the discourteous and if continued annually may easily result in making it difficult for the Association to get prominent speakers and artists to agree to appear.

The most that can be said in extenuation of the disorder is that it springs from the pleasure of being reunited for an evening with old friends. In this connection, the fault may lie with the sort of program usually scheduled. An evening of jovial reunion, without speeches or entertainment would unquestionally appeal to many, but it is not proven that the majority favors such a change.

Before the next dinner it would certainly seem desirable for the Association's dinner committee to determine exactly the sort of program which most guests would prefer. Having done that, it becomes the clear duty of the presiding officer and the committee to see that a minority shall not abuse the privileges of the majority of those present.

A Year to be Remembered

WHILE the year just closed has been somewhat disappointing to the rubber industry in several respects, and particularly from the standpoint of any greatly increased production, there have been a number of interesting and significant happenings within the industry which stand out as encouraging signs for 1928.

On the whole the tire manufacturers have been able to show their stockholders very satisfactory balance sheets, which in the face of the sharp decline in automobile production and the consequent falling off in tire demand, speaks most highly for the type of management and the excellent administrative and executive capacity of those who are at the helm in the industry today.

In the crude rubber trading branch of the industry the year has been conspicuous by the absence of sharp rises or declines in the market which have so often characterized rubber trading in the past and have frequently been the cause of red figures on the balance sheets of the manufacturing industry. During the year the price of spot rubber has ranged within the narrow limits of nine cents. That the facilities offered by the New York Rubber Exchange and the growing importance of that agency as a factor for the stabilization of prices contributed in no small way to this healthy condition cannot easily be denied.

A new spirit is to be noted in the activities of the rubber chemist groups and their efforts to coordinate researches in field of rubber chemistry. The cooperative exchange of scientific experimental data is more the practice today than ever before.

Not the least important development which took place during 1927 was the expansion program pursued by the larger manufacturing companies in erecting new plant units on the Pacific Coast and the opening of subsidiary companies abroad. Associated with this expansion and development has come the decision on the part of several of the companies to further enlarge their crude rubber plantation holdings.

Thus from the standpoint of the material progress made by the rubber industry, the year 1927 will not easily be forgotten.

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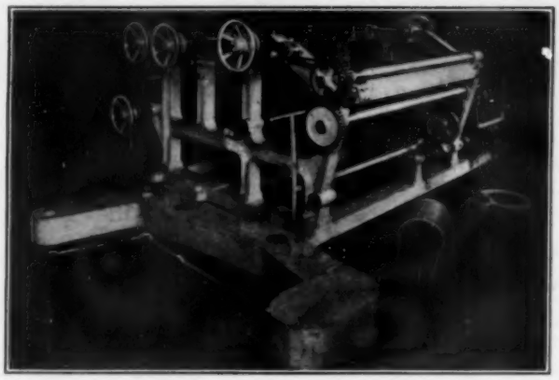

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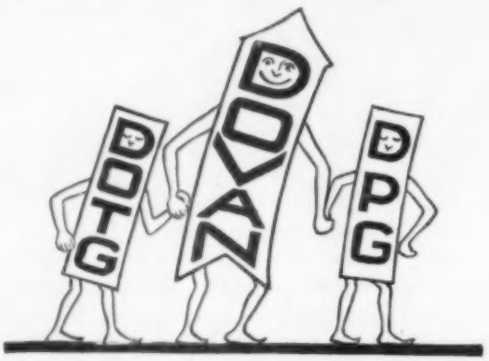

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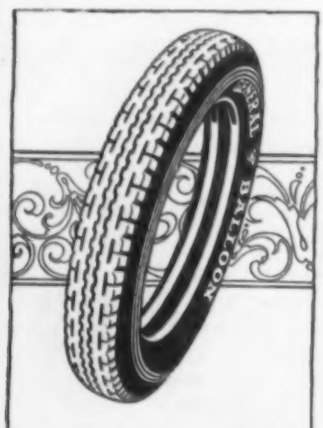

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NEWS of the INDUSTRY

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GOODRICH ANNOUNCES PERSONNEL CHANGES

Vacancies Filled in Board of Directors and High Executive Positions—J. D. Tew Succeeds to W. O. Rutherford's Duties as Sales Manager.

SEVERAL changes in the executive personnel of the B. F. Goodrich Company were announced at the close of the recent special meeting of the board of directors held at Akron on January 4. The most important announcement was that James D. Tew, first vice-president and formerly works manager, had been named general sales manager. In his new duties, Mr. Tew succeeds W. O. Rutherford whose resignation was announced last week. Mr. Tew, who has been with the Goodrich organization since 1906, became first vice-president in October, 1927, upon the elevation of Mr. Hough to the presidency.

Vacancies in the board of directors were filled at the same meeting by the election of George M. Moffett, F. G. Graham and S. M. Jett. Mr. Graham was also elected a member of the executive committee.

Graham Succeeds Tew

Mr. Graham, who was promoted some time ago from superintendent of tire production to assistant to Mr. Tew, will now succeed to the latter's position as works manager. Mr. Graham has been with the company since 1925. He was formerly with the Mason Tire & Rubber Company at Kent, O., and has won for himself a position of increasing prominence in the rubber manufacturing industry.

Mr. Jett succeeded F. C. Van Cleef, who resigned last October, as secretary of the company and has also been long with the Goodrich organization. Previous to his election to the position of secretary he was counsellor in the legal department. Mr. Moffett is a member of a New York firm of bankers.

Mr. Tew, who has had a particular interesting career in the rubber industry, was born in Jamestown, N. Y., in 1882, and graduated from Harvard as a mining engineer. Shortly after leaving college he went west and engaged in copper and silver mining for several months. Returning east for a visit late in 1905 he was persuaded by a friend to look into the possibilities of a career in the rubber manufacturing industry in Akron which was then just beginning to show signs of tremendous growth. So impressed was he with the chances for success that he procured a job as a shop worker and punched the clock in the tire department of the Diamond Rubber Company until he became head of the cord tire department of the company in 1910. In 1912, when the Diamond company was absorbed by Goodrich, he was continued in his position. In 1918 he was promoted to superintendent of the entire tire division, a position which he held up to his appointment as assistant works manager in 1925.

RADIO TO CONNECT LIBERIA AND AKRON

Efforts will soon be made to establish direct radio communication between the rubber plantations of the Firestone Tire and Rubber Company in Liberia and the home offices in Akron, according to an announcement recently made by Harvey S. Firestone, Jr., president of the Firestone Plantations Company. The Federal Radio Commission has acted favorably on an application from the company for a license to conduct a series of long distance experiments to determine the most effective way of developing direct radio communication. The transmitting station in Akron will begin experiments on short wave lengths immediately.

RUBBER MAN SUGGESTS SUPER-HIGHWAY PLAN

One of the most stupendous proposals for city improvements ever offered to a municipal council will soon be placed before the city council of Chicago when the so-called "Avondale" plan will be offered for approval.

The new Avondale proposal provides for an elevated motor express highway with grade crossings, 160 feet wide, extending the entire ten miles northwestward from Monroe street to the city limits and bordered throughout by a fifty-foot surface roadway. The south terminus of the highway will be in a ramp in Canal street at Monroe. The cost of construction is estimated at $60,000,000.

Credit for originating the Avondale highway idea is being given to Benjamin B. Felix, president of the Featheredge Rubber Company, of Chicago.

OFFICIALS FAVOR BILL FOR IMPORT COMBINES

Hoover and Jardine, With Raskob and Firestone, Tell Judiciary Committee That Newton Bill Should Be Passed to Help Fight Rubber Monopoly.

TWO cabinet officers, Secretary of Agriculture Jardine and Secretary of Commerce Hoover, together with Harvey S. Firestone of the Firestone Tire and Rubber Company and John J. Raskob of the General Motors Corporation, appeared before the Judiciary Committee of the House of Representatives in Washington on January 19 to urge favorable action on a bill to permit importers to form combinations when importing raw materials produced abroad under monopoly conditions. Crude rubber was one of the commodities named as being in need of such legislation.

The Newton bill, as the proposed legislation is known, would broaden the Webb-Pomerene Act, which now permits combinations of exporters, to include combinations of importers. Such a bill has been talked of for some time. In 1924 similar legislation was proposed in the Senate by Senator Capper, but failed of passage.

Foreign Monopolies Increasing

Secretary Hoover told the Judiciary Committee that foreign monopolies were increasing in number to the detriment of American importers and consumers of necessary raw materials.

Mr. Raskob was introduced as the chairman of the special rubber committee of the National Automobile Chamber of Commerce, and said that the committee thought the rubber situation was critical. A buying pool, in this country, he told the committee, had already succeeded in depressing rubber prices somewhat, but that the proposed legislation was needed to extend the pool without making it liable to prosecution under the anti-trust law.

The testimony of Mr. Firestone touched particularly on the necessity for planting more rubber under American control. He suggested an amendment to the Philippine land laws to make large plantations in those islands feasible. Expenditure of $500,000,000 would be necessary, he estimated, before the United States can produce enough rubber for its needs.

The action of the committee with regard to the Newton bill was not immediately announced, but it is expected that it will favorably report it for discussion and a vote on the floor of the House.

GAIN INDICATED IN U. S. RUBBER PROFITS

Net Earnings Estimated at Slightly Over $1 on 810,000 Shares of Common Outstanding — Earnings of Plantation Company May Increase Profits.

NET earnings for 1927 on the 810,000 common shares of the United States Rubber Company outstanding will approximate slightly over $1.00 per share, according to a recent Dow, Jones & Company analysis. Net earnings for the first ten months of the year were equal to 93 cents per share. This will compare with no earnings on the common stock in 1926 and $14.93 a share in 1925.

It is understood that while the United States Rubber Company experienced a poor year in tire sales during 1927, the footwear business, which had heretofore represented about 50 per cent of net earnings, will show a substantial gain with inventories of finished shoe products at a low figure.

Plantation Profits High

The estimated earnings as stated above do not include, however, the probable excellent profits of the U. S. Rubber Plantations, Inc., which is the rubber growing subsidiary of the company. In 1926, the parent company took the entire earnings of the plantation company, amounting to $6,000,000 into its income account. Net earnings of the plantation for 1927, in view of slightly lower crude rubber market prices, will probably amount to about $5,000,000. In addition to current earnings, however, the plantation company has in reserve a surplus of $9,000,000, which the parent company, in its semi-annual report as of June 30, 1927, stated was "available to provide for any additional adjustment that may be found necessary for the year."

In commenting on their analysis of the present position of the parent company, Dow, Jones & Company says: "Disappointing earnings of the United States Rubber Company are largely attributable to widely-scattered production and selling units, which add considerably to overhead. Closely knit, contralized factories, and distributing points account for much of the success of such companies as Goodrich, Goodyear and Firestone. Purchase by the duPonts of large blocks of U. S. Rubber common stock has given rise to conjectures that the future will see some important changes in the company's organization....The duPont holdings are estimated at from 200,000 to 300,000 shares, although Irene duPont has termed the latter figure a 'gross exaggeration.' In view of the fact that there are outstanding 810,000 shares of common stock and 651,000 shares of preferred, all possessing voting powers, it is apparent the duPonts would have to buy considerably more stock to obtain control.

"The feature of the U. S. Rubber organization which doubtless plays the most important part in attracting such investors as the duPonts is its ever-growing and increasingly profitable rubber-growing subsidiary, U. S. Rubber Plantations, Inc. At the close of 1926, U. S. Rubber Company owned 134,164 acres of plantation land, of which 104,232 acres were in Sumatra and 29,932 acres in Malaya. Of the total acreage owned 82,574 acres had been planted and about 18,000 acres more were in the process of development. This acreage constitutes the largest rubber plantation in the world."

FORD WILL FLY TO HIS BRAZIL RUBBER ESTATE

On the occasion of the opening of the Ford Industrial Show, January 9, at the Madison Square Garden, New York City, Henry Ford, who was present, announced that he shortly contemplates making a trip by air to his newly acquired rubber concession in Brazil. No definite date was named, however. One feature of the Industrial Exposition was a huge map of the world showing, among the many Ford interests, the wide strip of 4,000,000 acres of rubber lands representing the Brazilian concession.

J. C. WESTON ENGAGES IN BUSINESS IN DETROIT

Joseph C. Weston, until recently president of the Ajax Rubber Company, has established a private business in Detroit, under his own name, where he will represent Ajax tires and Salts Textiles, making connections direct with automobile manufacturers. His Detroit offices will be in the General Motors Building. It is understood that he will continue his association with the Ajax Company as chairman of its directorate and at the same time assume an active interest in the Salts Textile Company with which he has been associated for several years.

Among the staff of assistants which Mr. Weston has secured in his new enterprise, will be G. L. Mitchell, who has been district manager for the Ajax company at Detroit for a long time, and John R. Marinan, who has been closely identified with the Salts Textile Company and is an expert in manufacture of textiles for automobile upholstery.

Woodbury & Wheeler Company, 55 Second Street, Portland, Oregon, has been appointed exclusive distributor for the Manhattan Rubber Manufacturing Company, Passaic, N. J., for the Portland district and surrounding territory.

DE LASKI & THROPP LOSE CASE FOR APPEAL

The United States Supreme Court has denied the appeal for a writ of certiorari to review the decision of the Circuit Court of Appeals in the suit of the De Laski & Thropp Circular Woven Tire Company against the Murray Rubber Company. The Circuit Court of Appeals reversed the decision of the United States District Court which had awarded a verdict against the Murray Company in favor of the De Laski & Thropp Company. The decision now stands in favor of the Murray Company.

The suit involved alleged violation of patents of the De Laski & Thropp Company. Had the original verdict against the Murray Company stood, similar suits would have been started against other prominent tire manufacturers. A device by means of which fabric was formed about the walls and beads of tires, incorporated in a tire-making machine, was the basic point of the litigation. The De Laski & Thropp Company held a patent on the device and alleged other tire manufacturers were using the machine without license. The suit before the Circuit Court of Appeals was reported in THE RUBBER AGE of October 10, 1927.

NEW FOOTWEAR PRICES SHOW LITTLE CHANGE

Rubber footwear prices for 1928 were announced to the trade on January 1 when the salesmen started out with their new lines for next year. Save for a slight reduction in automatic fastener gaiters and miners' pacs, and a small increase on second quality boots, the list remained practically unchanged from a year ago. This is in reality a cut for the manufacturer as both cotton and rubber are higher than a year ago.

Mansfield Elects Officers

The Mansfield Tire and Rubber Company, Mansfield, Ohio, held its annual meeting of stockholders on January 7 and re-elected George W. Stevens as president and general manager. Judge C. R. Grant was named chairman of the board. Other officers elected include Philip H. Ober, as vice-president and assistant general manager; Jesse E. LaDow, secretary and general counsel; Charles Hoffman, treasurer, and K. J. Thompson, factory manager.

The reports of the company's officers indicated a satisfactory year during 1927, with the plant running day and night during the entire period.

CATALPO!

CATALPO!

A Page of Timely Foreign Rubber News

BRITISH RUBBER TRADE HAS PROSPEROUS YEAR

Waterproofing Trade Leads in Gains During 1927—Mechanical Goods Also Show Marked Improvement in Volume of Output—Tile Trade Brisk.

THE British rubber manufacturing industry in 1927 was characterized by two outstanding features common to all the many sections of the trade—namely, an improvement over 1926, and far busier conditions during the latter half of the year than during the first half. As regards the increased activity in the industry, first place was unquestionably taken by the manufacturers of waterproofings.

The season had a poor beginning but there was a gradual improvement up to May when the real boom commenced. From June until the end of October trade was extremely heavy, and manufacturers found it very difficult to keep up with orders and supply sufficient garments to meet the demand. Manufacturers were considerably hampered by a shortage of workers, and occasional difficulties in getting deliveries of rubber-proofed cloths in time.

Considerable fluctuations characterized the trade in mechanical rubber goods, but here again, business showed a marked improvement during the second half of the year, although the better feeling was distinctly noticeable in the electrical and engineering side of mechanicals. The trade in rubber belting was very fair, while the demand for hose was steady throughout the year and manufacturers are very pleased with the orders they have in hand for 1928.

Rubber tiling trade was very brisk during the second half of the year and still remains good. Orders have principally been received from public buildings such as picture theaters, banks, etc., and ¼-inch and 3/16-inch are the most popular tile thicknesses in demand. There was also a fair demand for rubber mats and matting and this trade continues to grow. The automobile tire and tube trade was fairly satisfactory although prices were for a time unprofitable owing to severe Continental competition.

On the whole, the outlook for 1928 is promising and manufacturers are optimistic, but there is a feeling that although business is good, prices are low and finely cut, and profits small. This is attributed to keen home competition.

Danish Company Prospers

Schionning & Arve, the Danish rubber goods manufacturers, of Copenhagen, have recently made public their latest financial statement, which shows a materially improved condition. According to the statement as reported by the American commercial attache to the Department of Commerce, the profits for the year amounted to 420,000 crowns, as against a large deficit incurred during the previous year. To cover this deficit, 150,000 crowns of this year's profits will be used and 146,000 crowns for ordinary amortization, together with 115,000 crowns for extraordinary amortization. The balance, or 9,000 crowns, will be carried over to next year's account.

Schionning & Arve are manufacturers of automobile and bicycle accessories, but also specialize in the production of technical rubber goods and like materials.

Dunlop Opens Factory Council Building

Dunlop Employees and Executives Who Attended Dedication Ceremony

THE Dunlop Rubber Company, Ltd., Fort Dunlop, England, has developed a system of local government within its plant through a Factory Council, composed of employees elected by their fellow workers and representatives of the company appointed by the directors. The organization is somewhat similar to the industrial assembly which functions amongst the employees of the Goodyear Tire & Rubber Company at Akron.

The Dunlop company has given every encouragement to the furtherance of the plan within its organization and recently built a Factory Chamber Council building to house the meetings of the body. Sir Eric Geddes made the dedication address when the new council chamber building was opened.

The main objects of the Council are to investigate grievances, avoid disputes and handle the general problems arising out of the internal administration of the plants and affecting the relationship as between the firm and its staff.

The Council consists of 43 employees, all of which are workers in the plant and 12 of which are women, and 18 members representing the directors. Its functions include the formulation of agreements with the company regarding wages and general conditions of employment and it acts in cooperation with the management in general matters affecting employment policy.

PARAGON RUBBER WORKS GUTTED BY BIG FIRE

Damage amounting to many thousands of pounds was caused by a disastrous fire which gutted the Paragon Rubber Works at Hull, England, recently. The machine shop, tool shop and storeroom were completely destroyed, but the flames were prevented from spreading to the dye works on the north side and the moulding works on the south side of the factory. The cause of the fire is unknown.

GERMAN CONTINENTAL TO INCREASE ITS CAPITAL

The Continental Rubber Company, of Hanover, Germany, in which the B. F. Goodrich Company is financially interested to an extent reported as more than 25 per cent of the total stock outstanding, has recently announced an increase in its capitalization by an additional 4,000,000 marks. The Goodrich company is reported to have taken 621,680 marks, and holds an option on another block of 378,320 marks.

With the new issue of stock, the German company's total capital will be 37,430,000 marks, or $9,357,500. The company's sales have increased over the last eleven months in both volume and value, and a resumption of dividends is expected. Dividends of 10 per cent were paid in 1924 and 1925, but they were passed in 1926.

Besides the financial relationship existing between the two companies, it is stated that Goodrich and Continental have an agreement for the interchange of patent rights and research investigations.

RUBBER DECLINES ON NEW YORK EXCHANGE

Market Has Been Quiet With Little Buying Interest From Factories—Price Levels Have Declined But Net Loss Is Only One Cent.

TRADING in crude rubber has been comparatively quiet both on the New York Exchange and in the outside market for the last two weeks and in the absence of buying interests, price levels have gradually receded. The drop has been steady, but hardly perceptible from day to day, the declines being within the range of 1 to 3 tenths of a cent. Spot rubber stood at 41 cents on January 4 and had declined to 39.80 cents on January 19. The volume of sales was light, the busiest day on the Exchange netting only 579 contracts.

Weakness in the London market was also apparent and further increases in London stocks added to the bearish tones. Heavy shipments from primary markets and the low U. S. consumption figure for December helped hold the market down.

The lack of buying interest from manufacturers is not causing any undue uneasiness in trading circles and there are no undercurrents in the trade to disturb the general optimistic outlook. The general hesitancy to make commitments is taken to reflect a desire on the part of manufacturers to gauge more definitely the general trends in business at the beginning of a new year.

DOTG Patent Suit Argued

An appeal from the United States Patent Office decision on interference proceedings on DOTG was argued before the Court of Appeals of the District of Columbia, on January 12. This suit involves the Winfield Scott application now held by DuPont, the Heuser application held by A. C. Burrage, Sr., and the Weiss application held by the Dovan Chemical Company. A decision is not expected for at least three months.

MARK L. FELBER QUITS AS PUBLICITY HEAD

After eight years service with the Firestone Tire and Rubber Company, in both advertising and publicity work, Mark L. Felber recently announced his resignation from the company. While no definite word has come as to his future plans it is understood that he is seriously considering an offer made by a New York newspaper.

Mr. Felber has been prominent in the formulation of the advertising programs of the Firestone company and is particularly credited with the advertising policy as related to Firestone dealers and distributors. He was also closely identified with the publicity growing out of Mr. Firestone's campaign for America to grow its own rubber and during the agitation in this regard, maintained offices in Washington in close touch with the government investigations.

G. Bert Foster, Mr. Felber's assistant, who has been with the Firestone company for the past three years, will succeed temporarily to the position as head of the publicity department.

CATALPO!

Frederick A. Seaman

Frederick A. Seaman, first vice-president of the Kelly-Springfield Tire Company, died at his home at Garden City, New York, on

F. A. SEAMAN

January 9. Mr. Seaman who was 65 years old, had been an executive of the Kelly-Springfield Tire Company since 1899, when it was known as the Consolidated Rubber Tire Company. In 1900 he was made a director and in 1919 became vice-president. For a short time in 1920 he assumed the duties of president and from then on to the time of his death he was first vice-president and a member of the executive committee.

C. G. Gislow Visits America

C. G. Gislow, general manager of the Svenska Gummifabriks Company, Gislaved, Sweden, made an extended visit to this country last month, taking in many of the Eastern and Mid-Western factories.

Mr. Gislow reports current production at his factory to be about 4,000 pair of footwear daily, 100 tires and tubes, and other miscellaneous products. A line of automatic fastener gaiters is produced similar to the Goodrich "Zipper."

IMPROVED FEATURES IN NEW TIRE SIZES

The new 30 x 4.50 size balloon tire has now been accepted as standard equipment for the new model Chevrolet. This makes the second of the new model cars to adopt this size tire, the new Model A Ford having been the first.

It is said by the companies making the new size that the tire has been designed to meet the demands for greater carrying capacity, quicker acceleration and other improvements in the new model cars.

The new tire, which has an increased 'air area' when on the rim of the new model Chevrolet and Ford, is approximately 4.75 inches in cross-sectional area, which is considerably larger than the tire used on the old models.

It is claimed that the new tire is also easier to mount on the rims of the new models. The Model A Ford is equipped with a 21-inch drop-center rim, while the Chevrolet retains the 21-inch flat base rim. The 30 x 4.50 tire is interchangeable on either the flat base or drop-center rim. The new size tire can also be used on the old models of both Chevrolet and Ford.

ACQUIRES LABORATORY FOR RECLAIMED RESEARCH

The Bishop Engineering Corporation of Akron, O., which has been prominent in the development of the reclaimed rubber industry, has recently purchased the modern factory building which was formerly the Portage Packing plant and 4½ acres of land located in Akron.

According to an announcement of C. E. Bishop, president of the corporation, complete laboratory equipment will be installed for the purpose of research work on reclaimed rubber processes with a view to improving the qualities of reclaimed, reducing the present production costs and generally promoting the use of reclaimed rubber in greater quantities. A miniature Bishop Process type of manufacturing unit will also be installed to carry on tests on special raw materials offered by scrap rubber dealers with a view to assisting the scrap dealers in classifying and standardizing the various grades of scrap rubber handled by them. Facilities for custom reclaiming will also be provided.

Closing Prices on Rubber Exchange of New York, Inc.

JANUARY 4 TO JANUARY 19, 1928

Date		Spot	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Sales*
Jan.	4	41.00	40.80	41.10	41.30	41.50	41.70	41.90	42.00	42.20	42.20	42.30	42.60	42.60	222
	5	40.80	40.70	40.90	41.20	41.40	41.60	41.80	41.90	42.00	42.20	42.20	42.50	42.60	142
	6	40.70	40.60	40.60	41.00	41.30	41.50	41.70	41.70	41.90	42.00	42 00	42.20	42.20	142
	7	40.50	40.30	40.50	40.90	41.20	41.40	41.60	41.60	41.70	41.80	41.90	42.10	42.20	127
	9	40.50	40.40	40.60	40.80	41.10	41.40	41.50	41.50	41.60	41.70	41.80	41.90	42.00	109
	10	40.30	40.70	40.40	40.70	40.90	41.20	41.30	41.40	41.50	41.50	41.70	41.80	41.90	169
	11	40.20	40.00	40.20	40.40	40.70	41.00	41.10	41.30	41.30	41.40	41.50	41.60	41.70	354
	12	40.30	40.10	40.20	40.70	41.00	41.40	41.50	41.60	41.70	41.70	41.90	42.00	42.10	579
	13	40.20	40.20	40.30	40.70	41.00	41.40	41.60	41.70	41.80	41.80	41.90	42.00	42.10	591
	14	40.20	40.20	40.30	40.70	41.00	41.40	41.40	41.60	41.70	41.70	41.80	42.00	42.10	109
	16	40.00	39.90	39.90	40.30	40.60	40.90	41.10	41.20	41.30	41.40	41.50	41.60	41.70	296
	17	39.80	39.70	39.70	40.10	40.50	40.80	41.00	41.10	41.20	41.30	41.50	41.70	41.70	387
	18	40.00	40.00	39 90	40 40	40.80	41.00	41.20	41.40	41.50	41.60	41.70	41.80	42.00	582
	19	40.00	39.80	40 00	40.20	40.50	40.80	40.90	41.10	41.20	41.30	41.40	41.60	41.80	526

(*) In lots of 2½ tons each

— Names in the News —

L. W. MAY has become vice-president of the Pioneer Asphalt Company, of Lawrenceville, Ill., with headquarters at the New York offices of Wichnick-Tumpeer, Inc. Mr. May, who has been manager of the mineral rubber department of Warner-Quinlan Company, New York City, resigned from that connection about the middle of December to accept his new position.

CHARLES H. WAGGENER of Charlestown, W. Va., has been named vice-president and general manager of the Carolina Rubber Company, of Salisbury, N. C., succeeding C. S. Munro, who has resigned. Mr. Waggener has already entered upon his new duties and has taken up his residence at Salisbury.

ARTHUR H. HAMILTON has been elected a director of the British firm of Geo. White, Yuille & Company, Ltd., well-known rubber brokers of 31 Fenchurch Street, London. Mr. Hamilton has been associated with the firm for several years.

C. C. CHING, supervisor of industrial relations of the United States Rubber Company and vice-president of the American Management Association, will preside at the afternoon session of the association's winter convention, February 8, which will be held at the Hotel Roosevelt, New York City. The speaker of the occasion will be E. S. Cowdrick, who will discuss 'Pensions as a Problem of Management.'

FLOYD SMITH, of the efficiency department of the Goodyear Tire & Rubber Company, Akron, has sailed for England to conduct various studies on timing operations and efficiency in the new British Goodyear plant. His stay abroad will be temporary, however, and he is expected to return as soon as his work has been completed.

K. S. REID, chief chemist of the North Australian Rubber Mills, Ltd., rubber footwear manufacturers of South Brisbane, Australia, is in the United States for a month's study of the manufacturing methods of American rubber factories. While in New York he attended the dinner of the New York group of the Rubber Division, A. C. S. Following a few visits in the East he will spend a week in Akron and expects to sail from California for Australia on February 9.

CHARLES C. GATES, president of the Gates Rubber Company of Denver, Colo., sailed from New Orleans on January 14, for an extensive tour through Latin America. Mr. Gates will combine business with pleasure during his trip and will call on his company's distributors at the various points visited. In a statement given out prior to sailing Mr. Gates expressed the belief that Latin America would afford an increasing market for American rubber goods and that one of his objects in making the trip was to survey the present commercial possibilities in that region.

HERBERT STANDRING is understood to have severed his connections with *The Rubber Age*, of London. Mr. Standring has long been a prominent figure in rubber trade journalism, his experience dating back 44 years, when he was associated with the founding of *The India Rubber Journal*, of London. He has been with *The Rubber Age*, of London, for the past eight years of its existence. *The Rubber Age*, of London, is not connected in any way with THE RUBBER AGE, of New York, which is the older of the two papers.

A. H. MASSEY, general sales manager of the Combination Rubber Company, Trenton, N. J., is on an extended business trip through the Far West.

J. A. DUVAL, recently resigned as superintendent of the F. S. Carr Company, Framingham, Mass., has joined the Fine Rubber Company, Malden, Mass., manufacturers of raincoats. The Fine Rubber Company, under the direction of its owner, Louis Fine, has been very successful in the production of black raincoats, and the acquisition of Mr. Duval to its staff indicates that they will enter the field of colored waterproof garments.

HARVEY S. FIRESTONE, JR., president of the Firestone Plantation Company, has sailed again for Liberia, where he will inspect the progress made in the development of the company's rubber properties.

HARRY ALEXANDER SMYTHE has been admitted to the partnership of Moulsdale & Shaw, rubber brokers, 16 Water Lane, London. Mr. Smythe has been connected with the rubber trade for many years and has lately been manager of the rubber department of Francis Welby & Co.

P. H. GOODALL, assistant sales manager of the Mohawk Rubber Company, accompanied by T. L. HOWLEY, New England district manager, recently completed an extensive business trip through the entire New England territory.

J. P. SCHILLER, Pacific Coast manager, and J. B. HASSETT, Los Angeles branch manager of the Dayton Rubber Manufacturing Company, visited the factory of the company at Dayton, Ohio, during the first week of January. It was the first time they had returned to Dayton since their appointments last fall.

J. M. MCCOMB, vice-president of the Crucible Steel Company of America, was elected president of the Motor and Accessory Manufacturers Association at a meeting of the board of directors on January 11, succeeding H. L. HORNING, who has headed the association for the past two years.

Executives Recently Promoted in Goodyear Organization

R. S. WILSON
Sales Manager

G. A. WADDLE
Asst. Sales Mgr.

C. E. CANNON
Personnel Manager

J. E. MAYL
Mgr. Truck Tire Sales

C. T. HUTCHINS
Advertising Manager

The Four Sons of the House of Firestone

The Chagrin Valley Polo Team, consisting of four sons of Harvey S. Firestone, just after they played a contest with the Flamingo Club of Miami Beach, Fla. Left to right, they are: Russel, Leonard, Raymond and Harvey S. Firestone, Jr.

FAULTLESS RUBBER CO. ELECTS NEW PRESIDENT

C. D. Hubler, vice-president and treasurer of the Faultless Rubber Company, Ashland, O., has been elevated to the presidency of the company by action of the board of directors to fill the vacancy caused by the recent resignation of James G. Lawrence. Mr. Hubler will continue to act as treasurer.

P. A. Myers was again elected vice-president and will succeed Mr. Hubler in his duties in that capacity. A new member of the board of directors to be elected was Ralph C. Foster, one of the oldest employees of the company in point of service, who will take Mr. Lawrence's place on the board, Mr. Lawrence having severed all connections with the company.

The new president of the company has been with the organization for 22 years and was elected vice-president and treasurer at the annual meeting last September. Prior to that time he had served as secretary and treasurer.

SWEDISH TIRE MAKERS VISIT UNITED STATES

Emil Salmson, president and managing director of A. Wiklunds Maskin and Velocipedfabrik, Stockholm, Sweden, and Albert Holmquist, managing director of the Trelleborg Gummifabriks, A.B., Trelleborg, Sweden, have been in the United States for several weeks and have spent considerable time in Akron where they made an trip of inspection through several of the rubber factories. Mr. Holmquist's plant at Trelleborg is one of the best known of the Swedish rubber factories. In recent years they have specialized on rubber belts or bands use on the caterpillar wheels of the heavy Scandinavian busses to enable them to travel through deep snow.

Duties on Rubber Reduced

Announcement has been made through the Rubber Growers' Association at London that by resolutions effective January 1, 1928, in the Legislative Council of the Straits Settlements and the Federal Council, the minimum export duty on rubber has been reduced from three Straits cents per pound to two Straits cents. This duty only applies to rubber exports in excess of the restrictive allowances under the Stevenson Act.

Carbon Black from Waste Gas

Godfrey L. Cabot, Inc., of Boston, have contracted with the Roxana Petroleum Corporation to purchase the waste residue gas from the Roxana's absorption gasoline plant near Skellytown, Texas. Cabot, Inc., are constructing a large carbon black plant at this point, in which this gas, which would otherwise waste into the air, will be used in carbon black manufacture. The Roxana Petroleum Corporation, at the present time, is estimated to be "blowing into the air" approximately 12,000,000 cubic feet of residue gas daily.

LEE TIRE AND RUBBER SHOWS BIG IMPROVEMENT

The annual report of the Lee Tire and Rubber Company, which due to a change in the fiscal year, ended October 31, 1927, and therefore covers only the ten months, shows a net income of $784,257, after interest and expenses, as compared with a loss of $1,670,068 at the close of 1926. The earnings are equivalent to $2.67 a share on the 293,261 shares outstanding. The net income includes a profit of $160,003 on the sale of securities of non-affiliated companies.

Net sales in the ten months totaled $10,175,169 as against $12,213,076 in 1926. Expenses, depreciation, etc, for 1927 showed a considerable drop, however.

The consolidated income account for 10 months ended October 31, 1927 as compared with the statement for the entire year of 1926 is as follows:

	10 mos. end. Oct. 31, '27	Year end. Dec. 31, '26
Net sales	$10,175,169	$12,213,076
Expenses, depr, etc	9,517,307	13,192,629
Operating profit	$ 657,862	*$979,553
Other inc.	†226,778	72,132
Total in.	$ 884,640	*$907,421
Int (net)	100,383	117,248
Inv. Adj.	.....	645,399
Net profit	$ 784,257	*$1,670,068

*Loss. †Includes $160,003 profit for sale of securities of non-affiliated companies.

HUGH BULLOCK DIRECTS TYER SALES AND OUTPUT

While no announcement has come from the Tyer Rubber Company, Andover, Mass., manufacturers of druggists' sundries and rubber footwear, relative to the recent affiliation of Hugh Bullock with that organization, it is understood that his new duties will include the direction of both the manufacturing and distribution of Tyer products.

Mr. Bullock received his early trading in rubber manufacturing at the Wales Goodyear plant and later became assistant superintendent of the Beacon Falls Rubber Shoe Company, which position he resigned to become superintendent at the Converse Rubber Shoe Company in 1909. With the latter company he rose to secretary and treasurer of the parent company and president of the subsidiary, the Converse Tire and Rubber Company.

CATALPO!

INTERNATIONAL PULP CO., *41 Park Row, New York, N. Y.*

SOLE PRODUCERS OF PURE **ASBESTINE** SPECIALLY PREPARED FOR USE IN RUBBER

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LIBERAL WORKING SAMPLE FURNISHED FREE

ERECTS HANDSOME WAREHOUSE IN WASHINGTON

The new warehouse erected by the Firestone Tire & Rubber Company at Washington, D. C., is a distinct departure from the usual type of storage buildings and the design has won the public commendation of the Washington Fine Arts Commission.

The building is a replica of an old Spanish mission and was designed by Firestone architects to blend with the new Federal building program in Washington.

Senator Smoot, chairman of the Public Buildings Commission, in praising the architectual beauty of the building, said: "I believe that the Firestone Tire & Rubber Company has set a fine example for other industrial concerns to follow. When Mr. Firestone already had foundations and material on the ground at a cost of $250,000 he not only consented to a change in the location of his plant but also agreed to cooperate to the fullest extent with all government agencies in erecting a building that would be a credit to the city."

Firestone Gift

Mr. and Mrs. Harvey S. Firestone, Sr., recently boosted the building fund for the Akron City Hospital to $1,150,000, by the gift of $350,000, contingent upon the city raising another $300,000 before May 1, 1928. The announcement of the offer was made by the permanent committee of the Better Akron Federation.

LEASES WAREHOUSE AND OFFICE IN MILWAUKEE

The Firestone Tire and Rubber Company has leased the large warehouse of the Cudahy Brothers Company at Milwaukee, for a period of ten years. The sum involved is said to amount to about $100,000 yearly. The Firestone company will use the warehouse for the storage of tires and as the company's Milwaukee office. About $25,000 will be spent in remodeling the building to suit the purpose of the company.

Thomas Appointed Distributor

Announcement has just been made of the appointment of V. G. Thomas & Co., New York, as distributors in the United States and Canada for the Antimony Products & Chemical Co., Ltd., Beckenham, England. This organization is operating in a new plant with modern facilities and is manufacturing antimony sulphides, rubber substitutes and other rubber chemicals.

A. P. King and H. E. King, both formerly of Typke & King, Ltd., London, are directors of this new concern. In addition several of the technical experts are said to also have been associated with Messrs. King in their former connection. It is claimed that due to this former experience, this concern is enabled to make materials exactly suited to rubber compounding.

Canadian Goodrich Expands

The Canadian Goodrich Company, Ltd., are making a four-story addition to their plant at Kitchener, Ontario, at an estimated cost of $150,000. The new addition is 200 by 250 feet in area.

The Puritan Rubber Company has recently let a contract for a new factory building, to cost $10,400. The company is reported to be operating night and day.

The Philadelphia Rubber Works Company

Manufacturer of

RECLAIMED RUBBER

of

STANDARDIZED QUALITY

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OAKS, PA.
(Montgomery County)

Consulting Rubber Technologist
PRACTICAL
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CATALPO!

LATE MARKET PRICES

Crude, Scrap & Reclaimed Rubber - Cottons and Fabrics

JANUARY 19, 1928

COTTON

THE cotton market has remained fairly steady during the last two weeks with spot prices for middlings holding around 19.50. With ample supplies available there is no great buying pressure apparent on the part of mills to provide for more than immediate needs. The Association of Cotton Textile Merchants of New York in conjunction with the Cotton Textile Institute reported sales of standard cotton cloth during December amounting to 109.6 per cent of production, indicating a healthy condition in the manufacturing industry. Total production for the entire year of 1927 was estimated by one of the leading cotton exchange members at 3,334,232,000 yards, with sales totaling 3,335,766,000 yards and unfilled orders on hand as of January 1, amounting to 386,726,000 yards. High, low and closing prices on January 19 were as follows:

			Jan. 19	Jan. 3
	High	Low	Close	Close
January	18.81	18.77	18.81	19.04
March	18.85	18.68	18.82	19.14
May	18.94	18.76	18.91	19.28

Tire Fabrics

The demand for tire fabrics is continuing light with plenty of inquiries in the market, but actual buying interest holding off. Prices have declined approximately one cent in sympathy with lower raw cotton prices. Factory purchases were heavy during December and it is assumed that most of the tire companies now have commitments covering stocks through the first quarter of the year. Late prices are as follows:

CORD			
Peeler, carded, 23/5/3	lb.	.43½@	.44
Peeler, carded, 23/4/3	lb.	.44½@	.45½
Peeler, carded, 13/3/3	lb.	.41 @	.42
Peeler, carded, 15/3/3	lb.	.42 @	.43
Egyptian, carded, 23/5/3	lb.	.53 @	.54
Egyptian, combed, 23/5/3	lb.	.57 @	.58
CHAFERS			
Carded American, 8 oz.	lb.	.38 @	.39
Carded American, 10 oz.	lb.	.41 @	.42
Carded American, 12 oz.	lb.	.40 @	.41
Carded American, 14 oz.	lb.	.38 @	.40
LENO BREAKER			
Carded American, 8¼ oz.	lb.	.41 @	.42
Carded American, 10¼ oz.	lb.	.41 @	.42
SQUARE WOVEN			
Carded American, 17¼ oz. 23-11 ply	lb.	.43 @	.44
Carded American, 17¼ oz. 10-5 ply	lb.	.38 @	.40

Sheetings

Small orders are reported in the sheeting market, but for the most part the trading has been dull. No changes are to be noted in prices over the last two weeks. Latest quotations follow:

40-inch 2.50-yard	yd.	.13¼@	.13½
40-inch 2.85-yard	yd.	.11⅝@	.11⅝
40-inch 3.15-yard	yd.	.12¼@	.12½
40-inch 3.60-yard	yd.	.10⅝@	.10⅝
40-inch 3.75-yard	yd.	.08⅝@	.09
40-inch 4.25-yard	yd.	.07⅞@	.08

Ducks

The demand for ducks has been renewed, especially in the awning lines, but commitments have been confined to small lots. Improvement is expected, however, in view of the belief that the factories have allowed stocks to run low. Prices as given below have not changed during the last two weeks.

Belting and Hose	lb.	.35 @	.36
Enameling	lb.	.35½@	.40
Shoe Ducks	lb.	.31 @	.35
Single filling	lb.	.15 @	.17½
Double filling	lb.	.18 @	.19

RECLAIMED RUBBER

The reclaimed rubber market has become distinctly firmer over the last two weeks and the demand continues steady. It was estimated that approximately 13,000 tons of reclaimed was used by the manufacturing industry during December and that the yearly consumption figure for 1927 will approximate 180,000. Prices on several grades of reclaimed have advanced. Latest quotations follow:

High Tensile			
Super-Reclaim No. 1 Black	lb.	.17¾@	.18
Super-Reclaim No. 2 Black	lb.	.14 @	.14½
High Tensile Red	lb.	.16¼@	.16½
Shoe			
Unwashed	lb.	.08 @	.08¼
Washed	lb.	.10 @	.10½
Tube			
No. 1 (Floating)	lb.	.18 @	.18½
No. 2 (Compounded)	lb.	.14¼@	.14½
Tires			
Black, washed		.10 @	.10¼
Black, unwashed		.08¼@	.08½
Black selected tires	lb.	.08¾@	.09
Dark Gray	lb.	.12½@	.13
Light Gray	lb.	.13¼@	.13½
White	lb.	.15 @	.15½
Truck, Heavy Gravity	lb.	.07¾@	.08
Truck, Light Gravity	lb.	.08¼@	.08½
Miscellaneous			
Mechanical Blends	lb.	.07 @	.08
Red	lb.	.14½@	.15

Scrap Rubber

The scrap rubber market has remained quiet with price levels slightly lower in the principal grades. Stocks have become more plentiful. Rubber reclaimers are holding out of the market, however, in the belief that it may steady itself with still lower quotations ruling. Latest prices are as follows:

(Prices to Consumer)

Auto tire peelings	ton	38.00	@40.00
Standard White auto	ton	65.00	@67.50
Mixed auto	ton	27.50	@28.50
Bicycle tires	ton	25.00	@26.50
Clean solid truck tires	ton	29.00	@32.00
Boots and shoes	lb.	.01⅞@	.02
Arctics, trimmed	lb.	.01⅝@	.01½
Arctics, untrimmed	lb.	.01 @	.01⅛
Inner tubes, No. 1	lb.	.09 @	.09⅛
Inner tubes, No. 2, compounded		.06 @	.06¼
Inner tubes, Red	lb.	.08 @	.08¾
Air Brake Hose	ton	40.00	@42.50
Rubber Hose	ton	18.00	@20.00

CRUDE RUBBER

THE crude market has maintained a quiet tone over the last two weeks with very little actual buying interest in evidence and an apparent hesitancy on the part of both brokers and factories to make commitments. The list has shown a gradual decline in price levels, but the drop has been confined within the range of ½ to 1½ cents on plantation grades. Stocks on hand and afloat to the United States reached a record peak at the end of December while consumption dropped to the lowest level of the year. London stocks have shown slight increases and shipments from the primary markets continue heavy, all of which factors have given the local market a distinctly bearish tone which is only counteracted by the increased activity in the rubber manufacturing industry and the air of confidence and optimism that prevails generally in all business circles. Latest prices on the New York outside market follow:

Plantations—			
Ribbed Smoked Sheets—			
Spot	.39¾@		.40
January	.39¾@		.40
February-March	.40 @		.40¼
April-May	.40¼@		.41
First Latex, crepe spot	.40 @		.40¼
Amber Crepe, No. 2 spot	.37¾@		.38
Amber Crepe, No. 2	.37¼@		.37½
Amber Crepe, No. 4	.36½@		.36¾
Brown Crepe, Rolled	.33¼@		.33½
Brown Crepe, Clean, thin	.37 @		.37¼
Brown Crepe, Specky	.36 @		.36½
Liquid Latex, per gal.	1.50	@	1.75
Pontianac—			
Bangermassin	Nominal		
Palembang	Nominal		
Prime Pressed	Nominal		
Sarawak	Nominal		
Paras—			
Up-river Fine	.31½@		.32
Up-river Medium	.27 @		.28
Up-river Coarse	.26¼@		.26½
Acre Bolivian, fine	.32 @		.32¼
Tapajos, fine	.41 @		—
Cut Beni Bolivian, fine	.49	@	—
Caucho Ball—			
Upper, shipment	.26¼@		.26½
Island, fine	.28¾@		.29
Centrals—			
Corinta, scrap	.30	@	—
Esmeralda, sausage	.25	@	.25½
Guayule, washed and dried	.29	@	—
Africans—			
Benguela, No. 2	Nominal		
Congo, upper, black	Nominal		
Congo, upper, red	Nominal		
Balata—			
Block, Colombia	.35½@		.38
Block, Cuidad	.35 @		.36
Gutta Percha—			
Siak	.24	@	—
Red Macassar	3.00	@	—

LONDON MARKET

Standard Ribbed Smoked Sheets—Buyers			
Spot	.19⅛@		.19⅜d
January	.19⅛@		.19⅜d
February	.19⅛@		.19⅜d
March	.19⅛@		.19⅜d

SINGAPORE MARKET

Standard Ribbed Smoked Sheets—Sellers			
Spot	.19⅛@		.19¼d

RUBBER CLAYS of the HIGHEST QUALITY

ARGOSITE CLAY

ULTRA FINE
REMARKABLY ADHESIVE
UNMATCHED PURITY

CONGAREE CLAY

EXCEEDING STANDARD
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UNITED CLAY MINES CORP'N. **TRENTON, N. J.**

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"TIRE" BRAND
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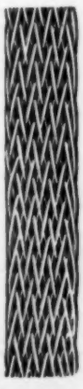

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Entire freedom from bead trouble in the construction of straight side tires is assured by the use of either National "(Patent)" High Tensile Strength, Flat Woven, Bead Braid on our new (Pratt Patent) Bead Cables. These cables, made to dimensions specified, have seven strands, yet only one piece of wire is used without soldered, welded or brazed joint.

Write for working samples of either National flat braid or Pratt cables (no charge to tire manufacturers) and full information as to our products and service.

Our engineering department tests beads and furnishes complete confidential reports as to their stretch, set and bursting point, without charge. Inquiries solicited regarding this special service.

National Standard Company
Niles, Michigan

LATE RUBBER CHEMICAL PRICES

Accelerators — Colors — Softeners — Compounding Materials

JANUARY 20, 1928

JANUARY business in rubber chemicals and compounding ingredients started off auspiciously with large orders in hand for practically all lines. Although the second and third week of the month did not come up to the previous week in volume, the month as a whole is expected to be the largest ever recorded by the chemical industry. Contract orders for such items as carbon blacks, whites, and accelerators exceeded 1927 by a considerable margin.

Great interest in the outcome of the DPG and DOTG suits reported elsewhere in this issue is apparent in the industry as on the outcome of these litigations depends the future supply and prices of these materials. In regard to prices, both DPG and DOTG have been reduced, the former being down 4 cents per pound and the latter 5 cents. Current quotations are now $.64 to $.68 and $.80 to $.85 respectively. Other prices are unchanged.

ACCELERATORS

Organic				
A-7	lb.	.70	@	.80
A-11	lb.	.75	@	.90
A-16	lb.	.65	@	.85
A-19	lb.	.75	@	.90
A-20	lb.	.60	@	.75
Aldehyde ammonia, crystals	lb.	.65	@	.70
Aniline oil, drums, f.o.b. works	lb.	.15	@	.16¼
Crylene	lb.	.70	@	—
paste	lb.	.50	@	—
Di-Ortho-Tolylguanidine	lb.	.80	@	.85
Diphenylguanidine	lb.	.64	@	.68
Ethylidene aniline	lb.	.60	@	.65
Excellerex	lb.	.35	@	.40
Formaldehyde Aniline	lb.	.38	@	.42
Grasselerator 102	lb.	.62½	@	.67½
Grasselerator 552	lb.	4.45	@	4.60
Grasselerator 808	lb.	1.05	@	1.35
Grasselerator 833	lb.	1.50	@	1.75
Heptene	lb.	.55	@	—
Hexamethylene-tetramine	lb.	.62½	@	.67½
Lithex	lb.	.18	@	.20
Methylenedianilide	lb.	.38	@	.40
Monex	lb.	3.25	@	—
Para-Nitrosodimethylaniline, f.o.b. works	lb.	.92	@	.96
Piperidine-Piperidyldithio-Carbamate	lb.	4.45	@	4.60
Quinoidine	lb.	.40	@	—
R & H 40	lb.	.50	@	.55
R & H 50	lb.	.50	@	.55
Safex	lb.	1.20	@	1.25
Tensilac, No. 39	lb.	.55	@	.60
Tensilac, No. 41	lb.	.65	@	.70
Thermlo F	lb.	.50	@	.55
Thiocarbanilide, kegs	lb.	.23	@	.25
Thionex	lb.	3.25	@	—
Trimene	lb.	.75	@	—
base	lb.	1.20	@	1.35
Triphenylguanidine	lb.	.65	@	.70
Vulcanex	lb.	.82	@	.86
Vulcone	lb.	.70	@	.74
Vulcanol	lb.	1.05	@	1.08
Z 88	lb.	.75	@	1.00
Inorganic				
Lead, sublimed blue	lb.	.08¼	@	.08¾
Lead, white	lb.	.10½	@	.12½
Litharge, domestic	lb.	.09	@	.09¼
Magnesia, calcined, light	lb.	.06	@	.12
heavy	lb.	.04	@	.04½

COLORS

Blacks (See Compounding Materials)				
Blues				
Prussian	lb.	.83	@	.85
Ultramarine	lb.	.08	@	.35
Browns				
Sienna, Italian	lb.	.05	@	.12½
Umber, Turkey	lb.	.04½	@	.06
Greens				
Chrome, light	lb.	.27	@	.31
medium	lb.	.29	@	.32
dark	lb.	.31	@	.34
Chromium Oxide, bbl.	lb.	.85	@	.88
Reds				
Antimony crimson, 15/17	lb.	.40	@	—
sulphur free	lb.	.50	@	.52
golden 15/17 F.S.	lb.	.16	@	.25
Indian English (dom.)	lb.	.08	@	.10
Oximony	lb.	.13¼	@	—
Para toner	lb.	.13	@	.14
Red oxide, reduced	lb.	.10	@	.11
pure	lb.	.14	@	.15
Venetian red	lb.	.02	@	.06
Vermillion, quicksilver, English	lb.	1.85	@	1.95
Whites				
Lithophone, Akcolith	lb.	.05 3/5	@	.06
Lithophone, Azolith	lb.	.05¼	@	.05¾
Lithopone, Vanolith	lb.	.05¾	@	—
Titanox	lb.	.10	@	.10½
Cal. Base Pigment	lb.	.10	@	.10½
Zinc Oxide—American Process				
American Azo:				
ZZZ (lead free)	lb.	.06½	@	.07
ZZ (leaded)	lb.	.06⅝	@	.07⅛
Zinc Oxide—French Process				
White seal	lb.	.11⅞	@	—
Green seal	lb.	.10⅞	@	—
Red Seal		.09⅞	@	—
Yellows				
Chrome	lb.	.17	@	.20
Ocher, French medium	lb.	.03½	@	.06
domestic	lb.	.01⅝	@	.02

COMPOUNDING MATERIALS

Aluminum Flake	ton	21.85	@	24.50
Ammonia carbonate	lb.	.10½	@	.12
Are-O-Sol	ton	8.00	@	11.00
Asbestine	ton	14.75	@	18.00
Barium carbonate	lb.	.02¼	@	.04
Barium Dust	lb.	.05	@	.06
Barytes southern off-color,	ton	12.00	@	18.00
Western prime white	ton	23.00	@	—
imported	ton	27.00	@	36.00
Basofor	lb.	.04½	@	—
Blacks				
Arrow "Aerfloted"	lb.	.08	@	.12
Bone Black	lb.	.05½	@	.11
Carbon, compressed	lb.	.07½	@	.11½
Carbon, uncompressed	lb.	.07	@	.11
Drop Black	lb.	.06	@	.10
Lamp Black	lb.	.12	@	.40
Micronex	lb.	.08	@	.12
Velvetex carbon	lb.	.04	@	.07
Blanc fixe dry f.o.b. works	lb.	.04	@	—
Carrara filler	lb.	.01¾	@	.02
Catalpo (fact.)	lb.	.02	@	—
Chalk	ton	12.00	@	14.00
Clay, China, domestic	ton	8.00	@	9.00
Aerfloted Suprex	ton	9.00	@	20.00
Mineral Flour, c. l. fob mine	ton	20.00	@	23.00
Tensulite		15.00	@	—
Glues, extra white	lb.	.20	@	.24
medium white	lb.	.20	@	.24
common bone	lb.	.14	@	.15
Magnesia, carbonate	lb.	.08½	@	.11
Mica, powdered	ton	90.00	@	100.00
Rotten Stone (powdered)	lb.	.02½	@	.04½
Soapstone, powdered	ton	15.00	@	22.00
Starch, powdered	cwt.	3.30	@	3.70
Talc, domestic	ton	12.00	@	15.00
Velvetex	lb.	.04	@	.07
Whiting, commercial	cwt.	.85	@	1.00
English cliffstone	cwt.	1.50	@	—
Superfine	ton	10.00	@	12.00
Vansulite	ton	12.00	@	—
Wood pulp XXX	ton	45.00	@	—
Wood pulp X	ton	25.00	@	—
Zinc Carbonate	lb.	.10	@	.12

MINERAL RUBBER

Genasco (factory)	ton	50.00	@	52.00
Montezuma, solid	ton	28.00	@	36.00
Montezuma, granulated	ton	32.00	@	42.00
Paradura	ton	62.50	@	65.00
Pioneer, MR, solid	ton	27.00	@	35.00
Pioneer-granulated	ton	32.00	@	40.00
Robertson, MR, solid	ton	34.00	@	80.00
M.R. (gran)	ton	34.00	@	80.00

SOFTENERS

Acids				
Nitric, 36 degrees	cwt.	5.00	@	5.25
Sulphuric, 60 degrees	ton	10.50	@	11.50
66 degrees	ton	15.00	@	16.00
Tartaric, crystals	lb.	.31½	@	—
Acids, Fatty				
Stearex	lb.	.10	@	.14
Stearic, single pressed	lb.	.10	@	.11
Double pressed	lb.	.11½	@	.12
Alkalies				
Caustic soda, 76%	cwt.	3.76	@	3.91
Soda ash, 58% C.L.	cwt.	1.42½	@	1.45
Oils				
Castor, No. 3 bbls.	lb.	.13½	@	.14
Corn, crude, bbls.	lb.	.09¼	@	.11
refined	lb.	.11	@	.11½
Cottonseed, crude		.08½	@	.08¾
Cycline	gal.	.27	@	.34
Degras	lb.	.04¼	@	.04½
Dispersol A (light)	lb.	.15	@	.16
Dispersol B (dark)	lb.	.14	@	.15
Fluxrite	lb.	.05	@	.06
Glycerine, C.P. drums	lb.	.26	@	.26½
Linseed, Raw C.L. bbl.	lb.	.09½	@	.10
Palm Lagos	lb.	.07¼	@	.07½
Niger	lb.	.07⅝	@	.08
Vansulol	lb.	.10½	@	—
Para-Flux	gal.	.17	@	—
Peanut, domestic, crude	lb.	.12	@	.12¼
Petrolatum, white	lb.	.08⅞	@	.09
amber	lb.	.03¾	@	.04
dark amber	lb.	.03⅜	@	.03½
Pine, steam distilled	lb.	.67	@	.69
Rapseed, refined	gal.	.80	@	.82
Rosin, first rectified	gal.	.55	@	—
second rectified	gal.	.58	@	—
Resins and Pitches				
Pitch, Burgundy	lb.	.06½	@	.07½
coal tar	gal.	.05½	@	.06
pine, 200 lb. gr. wt.	bbl.	9.00	@	10.00
Rosin, grade K, 280 lb.	bbl.	8.95	@	—
Pigmentar	gal.	.33	@	.41
Tar Retort, 50 gal.	bbl.	13.00	@	14.00
Solvents				
Acetone, pure	lb.	.14½	@	—
Alcohol denatured, No. 1 bbls.	gal.	.37½	@	.44½
Benzol, 90%	gal.	.28	@	—
pure		.29	@	—
Carbon bisulphide	lb.	.05½	@	.06¼
Carbon tetrachloride		.06¾	@	.07½
Motor gasoline, steel bbls.	gal.	.17	@	—
Naptha, V. M. & P.	gal.	.14	@	—
Turpentine, spirits	gal.	.57½	@	.58½
wood	gal.	.43	@	—
Waxes				
Beeswax	lb.	.56	@	.58
Carnauba	lb.	.40	@	.50
Ceresin, white	lb.	.13	@	.14
Montan, crude	lb.	.07	@	.07½
Ozokerite, black	lb.	.30	@	—
green	lb.	.26	@	.30
Miscellaneous				
RSL Mold Solution	gal.	.75	@	.100

ANTI-OXIDANTS

Antox	lb.	.79	@	.83
Neozone	lb.	.74	@	—
Stabilite	lb.	.65	@	—
VGB	lb.	.55	@	.66

SUBSTITUTES

Black	lb.	.08	@	.14
White	lb.	.10	@	.16
Brown	lb.	.08	@	.15

VULCANIZING INGREDIENTS

Sulphur Chloride (drums)	lb.	.03½	@	.06
Sulphur flour,				
Superfine bags	cwt.	2.20	@	2.80
Superfine, bbls.	cwt.	2.55	@	3.10
100% pure, refined, bags	cwt.	2.60	@	3.15
bbls.	cwt.	2.95	@	3.50

TIRES & TUBES
CRUDE RUBBER

STATISTICAL SECTION

AUTOMOBILES
GASOLINE

THE final net figure on crude rubber imports for December has not been released by the Department of Commerce as this is written, but unofficial figures of the Rubber Association of America indicate that the gross imports into the United States for the year 1927 will prove to have amounted to 432,316 tons. It is estimated, however, that after deducting the total re-exports for the year, the final net total will only slightly exceed the total net imports for 1926.

The consumption of crude rubber during December was a record low for the year, totaling only 25,492 tons, which brings the consumption figure for the year to the low total of 371,027 tons.

PLAN OF THE SECTION

The statistics included in this section have been chosen for their constant importance to the rubber industry. The tables are reprinted in the same relative position in every issue, each table being kept current by the addition of new figures as soon as they become available. The section accordingly affords the most up-to-date, complete and convenient statistical service in the industry.

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As a consequence of the continued heavy arrivals of crude rubber and the decline in consumption, stocks on hand and afloat to the United States stand at their highest peak in the history of the industry. During the last fortnight the stocks in London have also advanced.

The crude rubber markets both here and abroad have been quiet. During the last two weeks the price levels have gradually receded, registering a loss in all plantation grades of approximately 1 cent.

The latest figures covering imports and exports of rubber in the leading producing and consuming markets are included in the appropriate tables in this section.

U. S. Imports and Exports of Crude Rubber

	Gross Imports			Re-exports			Net Imports
YEARS	Long Tons	Total Declared Value	Average Declared Value per pound Cents	Long Tons	Total Declared Value	Average Declared Value per pound Cents	Long Tons
1921	185,394	73,772,677	17.76	5,716	2,414,924	18.86	179,678
1922	301,076	101,843,188	15.10	4,809	1,921,828	17.84	296,267
1923	309,144	185,060,304	26.72	8,772	5,672,819	28.87	300,372
1924	328,056	174,231,331	23.71	10,309	6,057,637	26.23	317,747
1925	396,642	429,705,014	48.36	14,827	19,847,753	59.76	381,815
1926	413,338	505,817,807	54.63	17,671	22,470,583	56.77	395,667
1925:							
Jan.	32,898	22,406,756	30.41	1,162	963,593	37.02	31,736
Feb.	24,696	18,532,115	33.50	979	779,406	35.53	23,717
Mar.	33,072	25,146,691	33.94	1,345	1,105,119	36.69	31,727
Apr.	32,506	24,874,562	34.16	1,130	1,009,305	39.86	31,376
May	36,932	30,311,754	36.64	1,203	1,323,445	49.12	35,729
June	31,569	26,855,883	37.98	1,198	1,577,106	58.75	30,371
July	32,455	33,701,723	46.36	1,278	2,132,681	74.52	31,177
Aug.	33,412	39,834,348	53.22	1,131	1,623,258	64.08	32,281
Sept.	26,367	26,686,013	62.11	1,154	1,820,360	70.41	25,213
Oct	34,651	50,027,338	64.45	1,132	1,989,291	78.43	33,519
Nov.	37,755	56,271,963	66.54	1,605	2,898,930	80.65	36,150
Dec.	40,329	65,055,868	72.02	1,510	2,625,259	77.61	38,819
1926:							
Jan.	42,404	72,528,151	76.36	2,084	3,747,505	80.28	40,320
Feb.	32,865	58,733,370	79.78	1,430	2,280,168	71.17	31,435
Mar.	42,152	70,589,581	74.76	1,836	2,735,234	66.51	40,316
Apr.	34,544	48,742,539	62.99	1,128	1,605,093	63.58	33,416
May	29,756	36,896,080	55.35	1,052	1,558,987	66.17	28,704
June	24,900	34,498,561	61.85	1,105	1,371,217	55.41	23,795
July	35,820	33,061,470	41.20	1,554	1,743,854	50.09	34,266
Aug.	27,400	24,670,752	40.21	1,318	1,339,563	45.38	26,082
Sept.	37,112	32,625,032	39.02	1,437	1,519,870	47.20	35,675
Oct.	29,333	25,300,483	38.50	1,366	1,316,270	43.02	27,967
Nov.	38,925	34,661,631	39.97	1,482	1,320,461	42.00	37,443
Dec.	37,754	33,261,366	39.33	1,904	1,841,305	43.16	35,850
1927:							
Jan.	43,340	36,753,719	37.99	1,526	1,444,734	42.22	41,814
Feb.	28,338	23,110,257	36.41	2,451	2,277,297	41.47	25,887
Mar.	35,514	28,693,026	36.07	2,763	3,249,665	52.50	32,751
Apr.	46,202	37,284,806	36.15	1,575	1,428,425	40.45	44,627
May	36,543	30,998,657	37.87	2,782	2,501,562	41.74	33,761
June	33,045	27,833,770	36.28	1,775	1,550,592	38.99	31,270
July	37,678	31,678,259	37.53	1,958	1,560,853	35.58	35,720
Aug.	32,810	26,396,904	36.59	1,809	1,382,768	34.49	31,001
Sept.	33,301	23,852,857	33 73	3,500	3,036,929	34.91	29,801
Oct.	30,184	22,163,044	32.77	2,513	2,042,713	36.29	27,671
Nov.	38,113	27,039,129	31.67	2,468	2,014,196	36.43	36,123
Dec.*	28,283	20,322,003	32.08				

*Official estimates based on arrivals at New York and Boston.

U. S. Consumption of Crude Rubber

(Rubber Association of America statistics raised to 100 per cent—All figures in long tons)

Figures on Monthly Basis

	1921	1922	1923	1924	1925	1926	1927
January	5,045	16,938	30,106	29,058	29,638	32,196	31,518
February	5,955	14,767	30,149	25,736	29,761	31,136	30,137
March	9,190	21,408	36,629	28,385	33,498	32,936	36,141
April	13,084	19,294	29,085	27,129	34,139	32,696	35,871
May	16,023	23,246	36,155	25,845	35,322	29,364	34,592
June	16,142	31,713	24,272	22,753	35,822	28,598	33,801
July	18,310	24,522	17,685	23,396	36,053	27,577	29,219
August	23,649	29,361	20,359	28,982	35,909	34,533	33,460
September	16,705	24,410	17,594	31,497	31,691	32,904	27,214
October	16,814	26,881	21,321	31,520	29,047	29,836	26,790
November	14,105	24,950	20,437	27,289	28,853	28,080	26,792
December	15,482	25,070	21,902	27,199	28,748	26,293	25,492
Totals	170,504	282,560	305,694	328,769	388,481	366,149	371,027

Figures on Quarterly Basis

Quarter	1921	1922	1923	1924	1925	1926	1927
Jan./Mar.			96,776	87,609	95,263	94,301	99,216
Apr./June	65,468	127,360	89,493	75,674	104,099	87,109	103,242
July/Sept.			55,621	83,813	99,493	93,793	89,893
Oct./Dec.	105,962	155,067	63,617	92,656	85,789	83,212	
Totals	171,425	282,427	305,507	339,752	384,644	358,415	

Note—The Rubber Association estimates its monthly rubber consumption figures to be 90 per cent complete. Up until 1925 the quarterly figures were likewise estimated to be 90 per cent complete; beginning with 1925 an estimate of 92 per cent completeness has been used. These estimates have been used in raising the figures in this table to 100 per cent. The quarterly figures are generally regarded as the most authentic; the monthly figures may be accepted as preliminary.

Rubber Invoiced to the U. S.

(Reported by American Consuls—Quantities in Long Tons)

During the Week Ended	From Br. Malaya	From Ceylon	From Dutch East Indies	From London & Liverpool	Total
November 12	2,956	631	1,593	1,032	6,212
November 19	4,579	651	1,051	451	6,732
November 26	4,014	779	1,588	1,945	8,326
December 3	6,348	847	1,641	943	9,779
December 10	5,014	709	2,890	635	9,248
December 17	5,395	565	1,801	1,789	9,550
December 24	5,483	1,030	1,487	1,229	9,229
December 31	4,810	719	1,988	268	7,785
January 7	4,569	357	1,828	158	6,912
January 14	4,546	475	1,200	302	6,523

Daily Spot Closing Prices of Ribbed Smoked Sheet Rubber—*New York Market, in Cents per Pound*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Ave.
1925																																
July	81⅛	81⅞	85⅞	—	—	83⅞	90½	95⅛	94⅝	99⅞	106¼	—	110	110⅜	110⅜	117	116⅝	118⅜	—	121	117⅛	119	112⅞	112¼	—	107⅞	96⅝	93¼	89¾	93⅜	103⅛
August	94⅜	—	96⅞	88⅜	85⅝	86⅞	81⅞	79	—	71¾	72½	76½	81½	80⅞	77⅜	78⅝	80⅜	80⅜	80¼	84⅞	82½	82⅜	82	82⅝	85¾	85⅞	85¾	87¼	90	88	88
September	85	87⅛	85	81¾	81¼	81¾	97	78¼	80½	68	86½	92	92⅜	92⅝	92⅝	92⅝	92⅝	92	94¾	93	93⅜	93⅜	90	89	89	89¾	91⅞	91½	88⅞	88⅞
October	91¼	91¾	92	94½	97	97½	97	99	98⅝	101	—	—	98	98⅜	98⅜	99⅜	99	99	99	99	99¾	99¾	99¾	99¾	98	99½	101½	99¾	100¾	98
November	99	99¾	—	98⅜	98¼	100	100¼	—	98⅝	99½	100¼	101¾	104½	105½	—	109	107	109¾	110¾	110⅛	110½	109	106¼	—	—	108⅝	108¾	107	—	104¾	98½
December	106¾	108½	107¾	107¼	108¼	—	108	109	109¾	106	105½	105½	—	101	99¼	99¼	98	98¼	98¾	98¾	88¾	88¾	88¾	—	—	—	108¾	91	93	91¾	91¾	98½
1926																																
January	—	—	87	87¼	85½	86½	87½	87⅞	87¾	—	88½	88¾	88¼	85½	84½	82½	—	73½	75¾	75	72	72½	68	66½	67	67	69¾	70½	69	—	—	79½
February	67	67½	66¼	66¾	63½	57⅞	—	66½	65⅞	66	66	66	65½	63	63	60⅞	60	60	59	60	61½	61	55	62	61¾	61	61	59⅞	—	—	—	62¼
March	58	58	58	58½	58½	59	58	56	61	60	63	51½	61½	62	60⅞	60⅞	61	62	61	61	61½	48	60	48⅜	60	60	59⅞	48	58½	58	—	59
April	59	—	59	59	59	58	56½	56½	53	49	49½	50½	48½	47½	47½	48½	47	47	47½	47½	48	48	46	48⅜	45	48	48	48⅜	49	—	—	51¼
May	48¾	—	50	50¼	49¼	49¾	49½	49	49	41¾	49½	49	48	47¾	48	48	47	48	48	47½	47½	44	44	46	45	42	45	43	42	—	—	47¾
June	41½	—	42	41½	42	—	41½	42	42	41½	42	41½	41	42	40	40	40	40	43	43	41	41	41	43½	43	41¼	41	42	42	39	39	42½
July	42	—	42	38½	37	37	—	41½	41½	41½	42	41½	41½	41½	41	41	40	40	40	41¾	41¾	41¾	41	41½	39	41¼	39	39¾	42½	39½	40	41
August	40¾	40¾	40¾	40¾	—	38¾	—	38¾	38¾	40¾	40	40¾	40¾	40¾	40¾	40¾	38	38	39	39	41	41½	39	39¾	42	42¼	42	42½	42½	—	—	42½
September	40¼	40¾	40¾	41	42¼	42¾	42¾	40¾	40¾	42½	42½	42½	42½	42½	42⅝	43	43	43	42⅜	42⅜	42⅜	42⅜	42⅜	38½	—	42¼	42⅜	42½	42½	—	—	42½
October	43	—	41	43¼	42¾	42¾	—	42¾	42½	41¾	41¾	42¾	41¾	41¾	41¾	41¾	41¾	41¾	42⅛	42⅛	42⅛	42⅛	42⅛	42⅛	42½	42½	42½	42½	42½	—	—	42½
November	41¼	—	41¼	41¼	41¼	41½	—	41¼	41½	41¾	41¾	41¾	41¾	41¾	41¾	40⅝	40⅝	40⅝	40⅝	40⅝	40⅝	40⅝	40⅝	38½	—	38	38	38	38	—	—	38½
December	36¾	37¼	37½	37½	—	—	37	—	37	37	37	37½	—	37⅝	37⅝	38	38	38	38	38¼	38¼	38½	38¾	38¾	—	38¾	38¾	38¾	38½	38¾	38	38¾
1927																																
January	—	—	38½	39	39¼	39¾	40⅝	40¼	—	40½	40¾	40⅜	40	40	—	—	39¾	39¾	39⅝	38½	38¼	38½	38¼	38¾	38	38½	—	38½	38	38	38	38⅝
February	87⅜	87⅜	87⅜	87½	87½	—	—	87⅜	87⅜	87¾	87¾	87¾	—	—	—	—	88¼	88¼	88⅜	88⅜	88⅜	88½	89	89	89	89	89	89	89	89	89	88¾
March	39¾	39¾	40	40¼	41	41¼	41¼	40⅝	40⅝	40⅝	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41¼
April	41¼	41¼	41¼	41	41	41¼	41¼	41¼	41¼	41¼	41¼	41¼	41	40⅝	40⅝	—	40⅞	40⅞	40⅜	40¾	40¾	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½
May	40½	40½	40¾	40½	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	41	40¾	40¾	40¾	40¾	40¾	40¾	40¾
June	40¾	40¾	40¼	40¼	—	39½	39½	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	40¾	41	40¾	40¾	40¾	40¾	40¾	40¾	40¾
July	35½	35½	35½	—	35¼	34½	34½	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	35	36¾	36¾	36¾	35¾	35¾	35¾	35¾
August	35½	35½	35¼	35¾	35¾	35½	35½	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	35	35	35	35	35	35	35	35⅝
Sept.	34	—	33¾	33¾	33½	—	33½	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33⅜	33½	33⅜	33⅜	34	33⅜	33⅜	34	33⅜
Oct.	35	35¼	35½	35¾	36¼	36¾	—	36¾	36¾	36¾	36¾	36¾	36¾	36¾	36¾	36¾	36¾	36¾	36¾	36¾	36¾	36¾	36¾	34¾	34¾	35	35	35	35¼	35¼	35¼	35¼
Nov.	40½	40¼	40¼	40¼	—	40¾	—	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½	40½
Dec.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1928																																
January	—	—	41¼	41¼	41¼	41¼	41	—	40⅝	40½	40¼	40⅝	40½	40¼	40¼	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛	40⅛
February	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
March	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
April	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Spot Closing Prices—Ribbed Smoked Sheets

(New York Market)

Average Price per Pound for Years 1910-1921

Year	Cents	Year	Cents	Year	Cents
1910	206.60	1914	65.33	1918	60.15
1911	141.30	1915	65.85	1919	48.70
1912	121.60	1916	72.50	1920	36.30
1913	82.04	1917	72.23	1921	16.36

Average Monthly Price per Pound Since 1922

Months	1922 Cents	1923 Cents	1924 Cents	1925 Cents	1926 Cents	1927 Cents	1928 Cents
Jan.	18.82	32.73	25.86	36.71	79.50	38.75	
Feb.	16.12	35.14	25.29	36.01	62.25	38.25	
Mar.	14.53	34.21	22.83	41.00	59.00	41.04	
Apr.	15.99	32.48	22.51	43.64	51.25	40.86	
May	15.25	27.39	18.89	58.47	47.75	40.76	
June	15.11	26.88	18.81	77.26	42.50	37.25	
July	14.67	26.10	22.16	103.16	41.03	34.44	
Aug.	13.93	28.84	26.17	82.99	38.50	35.12	
Sept.	14.44	28.95	27.56	88.88	41.00	33.67	
Oct.	19.78	26.93	31.13	98.01	42.50	34.32	
Nov.	23.88	27.14	34.33	104.80	38.50	37.58	
Dec.	27.42	26.60	37.88	98.51	38.25	40.63	
Average for Year	17.50	29.45	26.20	72.46	48.50	37.72	

London Closing Prices of Ribbed Smoked Sheet

(In Pence Per Pound)

Sixth Restriction Year—First Quarter

Day	Nov.	Dec.	Jan.	Day	Nov.	Dec.	Jan.
1	16⅞	19⅝	—	17	17⅜	19⅛	19¼
2	16⅞	19½	—	18	18⅛	—	19¼
3	17	19½	19⅞	19	18¼	19¾	19¼
4	17¼	—	19⅞	20	—	19⅞	
5	17½	19¾	19⅞	21	18½	19⅞	
6	—	19⅞	19¾	22	18½	19⅞	
7	17½	19¾	19¾	23	18⅞	20	
8	17½	19⅝	—	24	19⅜	—	
9	17⅝	19⅝	19⅝	25	19½	—	
10	17⅝	19¾	19⅝	26	19⅞	—	
11	17½	—	19⅝	27	—	—	
12	17½	19½	19⅝	28	20	19⅞	
13	—	19½	19½	29	19⅞	20	
14	17⅝	19⅜	19⅜	30	19½	20	
15	17⅜	19½	—	31	—	—	
16	17⅞	19½	19¾				

(The average price for the period for which daily prices are reported above is approximately 19.032 pence. The British Colonial Secretary has announced that only 60% of the standard production will be exportable from the restricted area during the next quarter if the price during the entire current quarter does not average at least 21 pence.)

Average Price in Previous Quarters

Quarter	1922-23	1923-24	1924-25	1925-26	1926-27
November-January	14.285	14.175	17.9983	46.709	19.265
February-April	16.858	12.917	19.356	28.103	19.696
May-July	**14.242**	**10.947**	**38.469**	**21.001**	**18.165**
August-October	14.944	14.632	43.269	20.199	16.620

Spot Closing Cotton Prices

(Middling Upland Grade—New York Market)

Recent Daily Price Per Pound

Day of Month	Dec. Cents	Jan. Cents	Day of Month	Dec. Cents	Jan. Cents	Day of Month	Dec. Cents	Jan. Cents
1	19.65	——	11	——	19.50	21	19.55	——
2	19.85	——	12	18.70	19.70	22	19.50	——
3	19.95	19.55	13	18.60	19.45	23	19.75	——
4	——	19.75	14	19.00	19.35	24	——	——
5	19.65	19.60	15	19.25	——	25	——	——
6	19.80	19.85	16	19.40	19.15	26	——	——
7	19.65	19.65	17	19.45	19.10	27	20.15	——
8	19.15	——	18	——	19.25	28	20.00	——
9	19.35	19.50	19	19.75	19.30	29	20.20	——
10	19.25	19.55	20	19.70	——	30	20.10	——
						31	20.10	——

Average Monthly Price Per Pound

Month	1925 Cents	1926 Cents	1927 Cents	Month	1925 Cents	1926 Cents	1927 Cents
Jan.	23.99	20.85	15.42	Aug.	23.72	18.57	20.04
Feb.	24.70	20.60	14.10	Sept.	23.79	17.02	21.95
Mar.	25.64	19.35	14.32	Oct.	21.77	13.14	20.55
Apr.	24.54	19.13	14.75	Nov.	20.94	12.86	20.22
May	23.41	18.92	16.07	Dec.	20.06	12.68	19.58
June	24.13	18.57	16.85	Average for Year	23.45	17.53	17.49
July	24.68	18.71	18.00				

Stock of Crude Rubber in the U. S.

(All Quantities in Long Tons)

At	ON HAND			AFLOAT			ON HAND AND AFLOAT		
End of	1925	1926	1927	1925	1926	1927	1925	1926	1927
Jan.	60,870	55,198	76,172	36,759	46,296	45,312	97,629	100,434	121,484
Feb.	54,109	58,035	91,186	41,475	46,935	42,166	95,584	104,970	133,352
March	52,494	61,822	85,740	40,577	43,567	49,600	93,071	105,389	135,340
April	50,143	55,261	92,757	53,465	41,905	38,963	103,608	97,166	131,720
May	52,064	64,360	94,563	46,846	40,303	44,181	98,910	104,663	138,744
June	50,997	60,460	89,250	51,202	40,907	47,233	102,199	101,367	136,483
July	46,245	64,900	98,469	46,003	38,062	40,587	92,248	102,962	139,056
Aug.	42,354	60,870	96,148	41,254	37,360	40,937	83,608	98,230	137,085
Sept.	36,367	62,078	97,829	55,151	42,464	37,966	91,518	105,542	135,793
Oct.	34,085	64,089	97,452	51,098	52,930	42,804	85,183	117,919	140,256
Nov.	34,885	69,385	101,034	42,692	47,311	37,076	86,577	116,696	138,110
Dec.	51,215	72,520	100,130	48,208	52,020	47,938	99,423	124,540	148,068

(Rubber Association of America figures raised to 100%.)

Stock of Crude Rubber in London

(No. of tons in Wharves and Warehouses, including Latex)

At end of:	1920	1921	1922	1923	1924	1925	1926	1927
Jan.	19,300	56,573	67,252	73,498	57,460	27,172	9,994	54,994
Feb.	18,329	59,439	67,623	70,483	56,732	23,425	10,004	58,826
Mar.	18,969	63,913	66,670	63,438	55,647	18,104	13,127	63,055
Apr.	20,072	68,759	68,637	58,770	54,559	12,949	18,773	66,897
May	20,921	70,403	70,146	54,439	51,615	5,895	20,384	67,169
June	22,517	69,408	71,597	51,050	51,115	5,318	23,984	63,902
July	25,346	71,065	71,515	49,937	52,073	4,258	27,727	63,717
Aug.	30,674	73,211	72,112	58,427	49,700	4,619	30,165	64,491
Sept.	35,504	72,175	70,977	54,523	44,011	5,453	35,077	68,236
Oct.	41,743	69,229	68,536	58,891	37,523	5,086	42,138	69,569
Nov.	45,550	70,786	68,548	60,074	33,593	3,869	44,057	67,050
Dec.	50,652	69,792	72,299	60,246	29,488	5,697	48,918	.....

At End of Recent Weeks

	First Saturday	Second Saturday	Third Saturday	Fourth Saturday	Fifth Saturday
1927					
July	63,917	64,163	63,511	62,819	63,626
August	64,177	64,557	64,842	64,259	——
September	65,162	66,148	66,664	67,253	——
October	68,519	70,167	70,916	70,060	69,551
November	69,660	69,501	69,850	67,318	——
December	65,869	66,011	64,761	63,397	63,207
1928					
January	64,360	65,524	——	——	——
February	——	——	——	——	——
March	——	——	——	——	——
April	——	——	——	——	——
May	——	——	——	——	——
June	——	——	——	——	——

Rubber in Singapore and Penang

(Stocks held by Dealers—Quantities in Long Tons)

End of	1925	1926	1927	End of	1925	1926	1927
Jan.	15,925	16,726	25,440	July	15,894	23,101	22,558
Feb.	17,320	13,653	26,766	Aug.	17,251	23,362	25,764
Mar.	17,261	18,389	27,844	Sept.	16,526	25,997	25,178
Apr.	15,368	16,328	24,543	Oct.	15,346	26,614	25,790
May	15,804	16,967	25,133	Nov.	19,788	25,486	28,369
June	15,884	19,416	21,898	Dec.	18,840	26,443	25,798

Rims Inspected and Passed in U. S.

(Tire and Rim Association Reports)

	Total	Per Cent Balloons		Total	Per Cent Balloons
1923	23,140,620	0.6	1925	26,001,664	66.8
1924	21,863,311	19.7	1926	24,199,524	78.8
1927			1927		
January	1,489,078	77.0	July	1,679,587	84.4
February	1,753,224	84.4	August	1,825,905	80.2
March	2,071,989	85.1	September	1,727,122	77.7
April	2,060,868	88.0	October	1,354,924	81.4
May	2,169,208	86.9	November	838,591	67.8
June	1,871,538	77.0	December	1,134,421	80.0

U. S. Consumption of Gasoline

(In Barrels of 42 Gallons)

MONTHS	1924	1925	1926	1927
January	11,918,000	14,386,000	17,582,000	17,888,000
February	9,626,000	13,210,000	15,814,000	18,240,000
March	10,961,000	14,890,000	19,302,000	22,464,000
April	14,583,000	19,013,000	20,848,000	23,371,000
May	15,889,000	20,459,000	24,213,000	26,579,000
June	16,421,000	20,724,000	23,803,000	27,799,000
July	18,610,000	22,879,000	24,752,000	29,784,000
August	19,825,000	22,323,000	26,912,000	29,779,000
September	16,871,000	20,177,000	22,929,000	28,409,000
October	18,029,000	19,826,000	23,973,000	25,497,000
November	16,607,000	18,024,000	20,618,000	24,400,000
December	15,663,000	17,954,000	21,419,000	
TOTAL	185,003,000	223,865,000	262,165,000	

U. S. Tire and Tube Statistics

(All Figures Represent Thousands)

AUTOMOBILE CASINGS

Figures for Recent Years

	1922	1923	1924	1925	1926
Production	40,932	45,259	51,633	60,845	61,237
Shipments	39,987	45,204	50,120	59,262	59,002
Inventory[2]	6,132	5,772	7,427	8,142	10,456

Figures for Recent Months

	PRODUCTION			SHIPMENTS			INVENTORY		
	1925	1926	1927	1925	1926	1927	1925	1926	1927
Jan.	4,740	4,587	4,965	4,013	2,974	4,932	7,949	9,947	10,432
Feb.	4,908	4,865	5,095	3,924	3,436	4,458	8,928	11,164	11,075
Mar.	5,276	5,456	6,276	4,657	4,561	5,701	9,510	12,004	11,583
Apr.	5,341	5,346	6,299	5,498	4,980	5,701	9,088	12,461	12,122
May	5,467	5,023	6,151	5,954	5,211	5,657	8,611	12,343	12,462
June	5,418	5,422	6,202	6,737	5,724	6,253	7,243	11,968	12,462
July	5,587	4,950	5,087	6,298	6,337	5,973	6,421	10,592	11,326
Aug.	5,607	5,872	5,752	4,760	6,744	6,393	7,261	9,732	10,721
Sept.	5,007	5,706	4,822	4,569	6,040	5,717	7,681	9,318	9,722
Oct.	4,505	5,103	4,777	5,580	4,544	4,799	6,670	9,917	9,667
Nov.	4,229	4,324	4,220	3,671	3,733	4,036	6,955	10,297	9,502
Dec.	4,760	4,683		3,601	4,718		8,142	10,456	

AUTOMOBILE INNER TUBES

Figures for Recent Years

	1922	1923	1924	1925	1926
Production	50,850	60,116	70,706	82,614	76,618
Shipments	49,673	59,072	68,016	81,004	71,591
Inventory[2]	7,643	8,425	11,052	11,313	16,200

Figures for Recent Months

	PRODUCTION			SHIPMENTS			INVENTORY		
	1925	1926	1927	1925	1926	1927	1925	1926	1927
Jan.	6,343	6,809	5,337	5,576	3,723	6,016	11,570	14,361	15,585
Feb.	6,339	6,825	5,658	4,971	3,736	5,120	13,023	17,090	16,075
Mar.	7,000	7,030	7,184	5,711	4,987	6,157	14,236	19,131	17,096
Apr.	6,851	6,554	7,373	6,704	5,051	6,359	13,618	20,674	17,801
May	6,846	6,149	6,737	8,040	6,304	6,140	12,501	21,141	18,389
June	6,942	6,171	6,306	9,032	6,898	6,852	10,409	20,245	17,858
July	7,544	5,729	5,284	9,140	8,569	7,070	8,635	17,267	16,004
Aug.	7,618	7,424	6,480	6,923	9,579	7,983	9,271	15,462	14,664
Sept.	7,254	7,590	5,651	6,665	7,762	6,758	9,950	15,312	13,511
Oct.	6,612	6,208	5,065	7,845	5,474	5,024	8,726	15,929	13,539
Nov.	6,266	4,852	4,471	5,406	4,045	4,427	9,941	16,604	12,736
Dec.	6,999	5,277		4,991	5,463		11,313	16,200	

(1) Rubber Association of America figures, raised to 100%. The Association estimates its figures to be 75% representative or complete when issued and that basis has been accepted when preparing the statistics in this table.

(2) Held by manufacturers at end of period indicated.

Automobile Production

	Passenger Cars			Trucks		
	Total	United States	Canada	Total	United States	Canada
1920	1,883,158	1,799,522	83,636	322,039	311,531	10,508
1921	1,514,000	1,452,902	61,098	147,550	142,402	5,148
1922	2,397,827	2,302,923	94,904	251,434	244,285	7,149
1923	3,719,164	3,589,936	129,228	378,288	361,078	17,210
1924	3,262,764	3,144,999	117,765	378,106	360,625	17,481
1925	3,817,639	3,678,328	139,311	498,019	475,941	22,078
1926						
January	284,703	272,922	11,781	33,461	29,763	3,698
February	334,524	319,763	14,761	41,685	37,608	4,077
March	399,105	381,116	17,989	49,233	44,848	4,385
April	401,836	383,907	17,929	53,887	50,314	3,573
May	394,569	373,140	21,429	51,343	47,838	3,505
June	358,360	339,542	18,818	47,043	44,110	2,933
July	328,816	315,863	12,953	41,847	39,592	2,255
August	393,040	380,258	12,782	47,907	45,404	2,503
September	363,537	350,913	12,624	51,299	46,428	4,871
October	300,142	289,547	10,595	46,965	42,890	4,075
November	226,278	219,504	6,774	39,410	36,356	3,054
December	143,413	137,361	6,052	30,002	28,302	1,700
TOTAL	3,928,323	3,766,336	161,487	534,082	493,453	40,629
January	208,718	196,973	11,745	40,874	37,243	3,631
February	275,458	260,632	14,826	41,947	38,118	3,829
March	360,754	341,665	19,089	48,590	45,056	3,534
April	373,961	353,071	20,890	48,216	44,495	3,721
May	374,259	352,268	21,991	47,890	44,173	3,717
June	290,188	273,718	16,470	45,003	40,265	2,738
July	242,144	233,425	8,719	32,249	29,981	2,268
August	281,464	271,325	10,139	34,552	31,715	2,837
September	233,694	225,013	8,681	35,145	32,564	2,581
October	191,942	185,706	6,236	37,141	35,586	1,555
November	114,076	108,903	5,173	25,743	24,299	1,444
December	145,902	139,850	6,052	29,772	28,072	1,700
TOTAL	3,973,236	3,808,753	164,483	500,869	461,960	38,909

Exports of Crude Rubber from Principal Producing Countries

(*Long Tons*)

	BRITISH MALAYA[1]								DUTCH EAST INDIES[2]						
	Gross Exports	Imports	Gross Exports Minus Imports	Ceylon[3]	India & Burma[4]	Sarawak[4]	British North Borneo[4]	Siam[4]	Java & Madura	Sumatra E. Coast	Other D.E.I.	Indo-China[3]	Amazon Valley[4]	All Other[4]	World Total[7]
1923	252,016	70,432	181,584	39,971	6,416	5,705	4,237	1,718	32,930	46,344	57,822	5,067	16,765	7,856	406,955
1924	259,706	108,524	151,182	39,997	7,697	6,699	4,621	2,962	42,446	54,497	80,347	6,688	23,165	9,065	429,366
1925	316,825	158,022	158,803	49,566	10,082	5,424	5,377	5,377	46,757	65,499	120,626	7,881	25,298	13,797	517,523
1926:															
Jan.	30,452	10,237	20,215	4,246	1,273	416	472	289	4,110	6,239	8,165	866	1,284	1,805	49,380
Feb.	30,440	8,306	22,134	5,120	725	488	450	253	4,524	5,717	6,854	554	2,759	1,978	51,556
Mar.	35,012	14,800	20,212	5,177	1,113	792	561	418	4,527	5,566	11,984	573	2,126	1,899	54,948
Apr.	23,727	10,565	13,162	3,766	590	679	374	293	4,226	4,598	6,285	410	2,318	1,529	38,230
May	31,231	10,604	20,627	3,944	691	927	410	279	4,440	5,358	8,737	502	1,353	1,464	48,732
June	30,624	11,764	18,860	4,208	452	779	512	275	4,444	6,125	10,614	549	1,213	1,279	49,310
July	28,824	15,280	13,544	4,422	938	911	498	439	4,618	5,612	13,112	1,521	1,565	1,148	48,328
Aug.	34,625	13,595	21,030	5,666	521	890	476	316	4,132	5,699	10,390	378	1,888	1,097	52,483
Sept.	35,913	13,972	21,941	6,015	651	888	689	457	4,065	6,568	11,391	681	2,156	822	56,324
Oct.	39,367	15,208	24,164	5,672	634	805	473	385	4,058	6,998	11,491	661	1,904	1,023	58,268
Nov.	34,302	12,201	22,101	4,228	1,110	685	547	285	3,988	5,816	9,422	718	1,911	1,259	52,070
Dec.	36,811	14,716	22,095	6,498	1,176	895	617	338	5,054	7,117	12,786	790	3,821	714	61,901
	391,328	151,243	240,085	58,962	9,874	9,155	6,079	4,027	52,186	71,413	121,231	8,203	24,298	16,017	621,530
1927:															
Jan.	34,946	14,995	19,951	6,697	921	959	585	304	4,184	6,705	10,541	941	2,885	981	55,654
Feb.	27,528	11,607	15,921	3,571	1,469	552	445	360	4,707	6,526	10,634	675	2,082	1,098	48,040
Mar.	41,346	17,464	23,882	7,142	1,124	997	639	432	5,657	7,003	12,490	733	3,203	1,791	65,093
Apr.	29,041	13,069	15,972	3,349	723	984	452	526	4,666	5,530	10,035	557	2,374	1,495	46,663
May	31,393	15,491	15,902	3,124	760	786	415	348	5,430	5,528	14,099	586	2,431	1,207	50,616
June	32,607	14,706	17,901	3,348	856	1,100	539	409	4,818	5,519	9,402	772	1,030	1,706	47,400
July	23,947	12,697	11,250	4,018	827	859	500*	333	4,771	6,140	11,663	519	1,713	1,115	*43,708
Aug.	30,371	17,105	13,266	5,357	688	1,133	500*	546	4,355	6,683	12,054	716	2,004	969	*48,271
Sept.	29,835	12,095	17,740	4,911	479	645	500*	498	3,635	6,052	10,059	497	2,474	1,213	*48,703
Oct.	29,846	15,801	14,045	5,245	802	721	500*	542	3,810	7,755	13,633	775	2,704	1,155*	*51,597
Nov.	28,277	19,860	8,417	4,464	1,277	1,241	500*	600	4,127	6,587	14,393	683	2,547	1,196*	*46,032
Dec.	32,185	17,865	14,320									1,191	3,321		

(1) Mayalan net exports cannot be taken as production, since imported rubber is largely wet native rubber, which is reduced about one-third in weight by remilling; rubber exported as latex is not included which on a basis of 3½ pounds per gallon amounted to 115 tons in 1923, 1,117 in 1924, 3,618 in 1925, and 3,263 in 1926. (2) Ceylon Chamber of Commerce statistics until 1926; rubber exported as latex is not included—such shipments were equivalent to 18 tons in 1923, 93 tons 1924, 6 tons 1925, and about 20 tons in 1926. (3) Official statistics. (4) Imports into Singapore and Penang. (5) Exports from "Other D.E.I." are chiefly wet native rubber, which is reduced about one-third in weight by remilling; rubber exported as latex is not included which on a basis of 3½ pounds per gallon amounted to 2,342 tons in 1923, 1,008 tons 1924, 2,239 tons 1925, and about 60 tons in 1926. (6) Calculated from official import statistics of principal consuming countries, viz., United States, United Kingdom, France, Germany, Italy, Belgium and Netherlands. This figure includes guayule rubber. (7) This total includes the third column for British Malaya, "Gross Exports minus Imports," and all the figures shown for the other territories. *Figure is provisional; final figure will be shown immediately it becomes available.

Net Imports of Crude Rubber into Principal Manufacturing Countries

(*Long Tons*)

	United States*	United Kingdom	France (h)	Germany	Canada (ac)	Japan (ac)	Italy	Russia (ce)	Australia (cd)	Belgium (d)	Netherlands	Scandinavia (abcdf)	Spain (g)	Czechoslovakia (abcd)	World Total
1919	236,977	42,671	17,685	5,584	6,395	9,753	9,894	75	1,002	3,995	2,771	3,149	2,418	9	342,378
1920	248,762	56,844	13,885	11,890	11,746	5,297	6,123	62	1,815	3,840	5,510	2,292	2,008	567	370,641
1921	179,678	42,087	15,135	21,920	8,124	21,713	3,906	165	1,014	1,705	1,022	1,279	2,245	569	300,562
1922	296,267	11,724	24,352	27,546	9,207	15,934	6,430	2,493	2,643	172	-3,807	1,778	589	567	395,885
1923	300,372	12,700	27,392	18,519	13,277	15,372	8,489	2,986	1,649	2,184	792	2,528	630	1,128	408,018
1924	317,747	-11,550	30,446	22,727	14,299	19,571	8,764	2,346	3,124	2,688	-807	3,178	944	1,370	414,847
1925	381,815	4,061	32,956	33,937	19,683	11,117	11,412	7,088	4,757	2,930	875	3,149	1,155	1,558	516,493
1926	395,667	84,865	34,240	22,775	20,229	18,125	9,809	6,529	9,021	2,498	2,670	4,046	1,299	1,870	613,643
1926:															
January	40,345	6,886	2,832	703	2,188	892	760	332	438	76	163	303	89	134	56,141
February	31,435	3,114	3,063	1,113	1,865	741	1,041	643	512	143	88	397	145	75	44,375
March	40,316	3,907	3,941	1,342	2,079	864	1,037	832	547	129	227	377	109	161	60,868
April	33,416	3,275	4,121	1,781	1,615	1,868	865	402	505	71	93	335	130	198	53,670
May	28,705	6,773	2,519	1,848	1,239	1,010	705	200	468	186	241	225	60	192	44,371
June	23,795	5,894	2,196	1,655	1,188	1,465	1,070	983	636	269	215	303	123	103	39,9**
July	34,266	6,768	2,352	2,202	1,552	1,447	800	132	702	295	480	292	121	115	51,b..
August	26,081	7,327	2,457	2,110	1,888	1,284	796	655	1,275	303	594	336	90	151	45,347
September	35,675	8,843	1,774	2,029	1,355	1,922	819	472	1,241	283	429	317	91	138	55,388
October	28,110	8,082	3,376	2,423	1,865	2,396	645	585	1,004	301	2	360	100	121	49,370
November	37,673	9,247	2,719	3,007	1,548	3,380	832	568	916	194	-18	358	90	181	60,695
December	35,850	4,749	2,890	2,562	1,847	856	439	725	777	248	156	443	151	306	51,999
1927:															
January	41,815	10,192	3,284	2,481	1,936	1,227	672	803	929	296	181	316	139	100	64,371
February	25,886	7,692	3,263	3,103	2,620	1,902	601	907	460	502	153	336	146	210	47,781
March	32,752	9,049	2,050	3,475	3,760	1,578	852	784	780	454	86	385	137	127	56,026
April	44,627	7,875	2,310	2,393	1,509	2,181	781	1,972	762	448	58	230	177	218	65,541
May	33,761	2,896	2,006	3,380	2,519	1,084	918	887	694	633	-57	335	155	223	49,434
June	31,270	2,282	2,387	3,632	2,086	798	942	1,506	557	575	-16	243	164	183	46,609
July	35,720	1,116	2,384	2,946	2,104	1,505	1,007	415	900	436	66	227	177	236	49,239
August	31,001	3,463	2,795	3,119	2,013	1,970	684	518	772	552	-32	451	155	272	48,598
September	28,704	7,800	1,956	2,891	1,850	2,025	1,021	1,075	908	465	156	401	153	363	50,361
October	27,671	5,888	4,302	4,202	1,790	1,966		1,312	836		298				
November	36,123	1,687	2,837	4,209	1,916										
December															

a—Including gutta percha. b—Including balata. c—Re-exports not deducted in monthly statistics. d—Including some scrap and reclaimed rubber. e—United Kingdom exports to Russia, and beginning with October, 1927, exports from the United States to Russia. f—Including Norway, Sweden, Denmark and Finland. g—United Kingdom and French exports to Spain except in years prior to 1925. h—French imports have been reduced 12 per cent in order to eliminate imports of gutta percha and to reduce to basis of net weight. *United States imports of guayule are not included in this compilation: such imports amounted to 4,305 tons in 1926 and averaged about 400 tons monthly during the first ten months of 1927.

December Rim Output Called For

The December report of the Tire and Rim Association of America, Inc., begins to reflect the upward turn in automobile production. The total number of rims inspected and approved during the month climbed to 1,134,421 or 295,830 more than in November and even exceed the total of December, 1926, by a small margin of approximately 38,000.

Rim Size	Dec. No.	1927 %	12 Mos. No.	1927 %
Motorcycle				
28x2½	—	—	755	0.0
24x3	3458	0.3	39745	0.2
26x3	1702	0.2	42963	0.2
28x3	—	—	5489	0.0
Total.....	5160	0.5	88952	0.4
Clinchers				
30x3½	36509	3.2	1174170	5.9
31x4	1513	0.1	19985	0.1
Total.....	38022	3.3	1194155	6.0
18" Balloon				
25x3½-18	—	—	217	0.0
26x4-18....	62181	5.5	821837	4.1
27x4½-18	8845	0.7	53120	0.3
28x5-18....	28	0.0	304	0.0
30x6-18....	72	0.0	72	0.0
Total.....	71126	6.2	875550	4.4
19" Balloon				
26x3½-19	36628	3.2	607911	3.0
27x4-19....	129765	11.4	1088440	5.4
28x4½-19	48377	4.3	481240	2.4
29x5-19....	130	0.0	1915	0.0
Total.....	214900	18.9	2179506	10.8
20" Balloon				
27x3½-20	23234	2.1	350913	1.8
28x4-20....	180016	15.9	2865219	14.3
29x4½-20	22315	2.0	423945	2.8
30x5-20....	54840	4.8	436998	2.2
32x6-20....	8630	0.8	71956	0.4
Total.....	289035	25.6	4149031	21.5
21" Balloon				
28x3½-21	63904	5.6	5573981	27.1
2.75-21-D	220359	19.4	237074	1.2
29x4-21....	20144	1.8	1822370	9.1
30x4½-21	27609	2.4	1140841	5.7
31x5-21....	210	0.0	112187	0.6
33x6-21....	—	—	42641	0.2
Total.....	332226	29.2	8929094	43.9

Rim Size	Dec. No.	1927 %	12 Mos. No.	1927 %
22" Balloon				
29x3½-22	—	—	404	0.0
30x4-22....	562	0.0	9046	0.0
31x4½-22	1209	0.1	10548	0.1
Total.....	1771	0.1	19998	0.1
High Pressure				
30x3½-23	7577	0.7	116727	0.6
31x4-23....	—	—	6109	0.0
32x4½-23	5272	0.5	182558	0.9
32x4-24....	3494	0.3	157666	0.8
33x4½-24	—	—	2176	0.0
32x3½-25	—	—	14997	0.1
33x4-25....	3279	0.3	10553	0.1
34x4½-25	923	0.1	24085	0.1
Total.....	20545	1.9	514871	2.6
20" Truck				
30x5-20..	125202	11.0	1560619	7.8
32x6-20....	20715	1.8	279952	1.4
34x7-20....	2055	0.2	73788	0.4
36x8-20....	3468	0.3	21682	0.1
40x10-20..	764	0.1	2056	0.0
Total.....	152204	13.4	1938097	9.7
22" Truck				
36x7-22....	553	0.0	2425	0.0
38x8-22....	—	—	30	0.0
Total.....	553	0.0	2455	0.0
24" Truck				
34x5-24....	2086	0.2	38687	0.2
36x6-24....	1857	0.2	43344	0.2
38x7-24....	2826	0.3	22961	0.1
40x8-24....	2110	0.2	14815	0.1
44x10-24..	—	—	539	0.0
Total.....	8879	0.9	120346	0.6
GRAND TOTAL	1134421		20012055	

November Tire Report Shows Decline

TIRE production showed another severe drop during November with only 4,220,180 as the grand total for all types of pneumatic casings manufactured as against 4,777,172 in October. Inventories showed 9,502,375 casings in manufacturers' hands as compared to 9,667,965 in October. Shipments also fell off, the total being 4,036,455 casings as against 4,799,273 during the previous month. The figures as released by the Rubber Association of America represent 75 per cent of the total industry and have been brought up in each case mentioned herein to equal 100 per cent.

The conditions surrounding the production, shipments and inventories of inner tubes were identical to those of as indicated above for casings. Production fell off from the previous month, shipments from manufacturing plants were less and inventories remained practically unchanged. The total number of inner tubes produced during November was 4,471,617 as against 5,065,328 in October. Shipments totaled 4,427,410 tubes as against 5,024,757 in the previous month while inventories showed 12,736,052 inner tubes on hand at the end of November as against 13,539,592 at the end of October.

Production of both pneumatic casings and tubes also lagged behind the production of November, 1926, but only by a small margin. Factory shipments in November, 1927, were slightly higher than shipments in the corresponding month of 1926 and inventories of both casings and tubes showed encouraging declines from the figures of the previous year.

The low production for the month had been expected in view of the very low November crude rubber consumption figure which was announced early in December. In the light of the recently published figure for rubber consumption during the month of December no improvement can well be expected in December production.

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